

75  
Azadi Ka  
Amrit Mahotsav



NBQP

National Board  
for Quality Promotion

Prof. S.K. Joshi  
**Laboratory  
Excellence  
Award**

[www.labexcellenceaward.qcin.org](http://www.labexcellenceaward.qcin.org)

**QUALITY**  
A QCI PUBLICATION  
July - September 2021  
**INDIA**



**QUALITY COUNCIL  
OF INDIA**  
Creating an Ecosystem for Quality

# EDITOR'S NOTE



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

Dear Friends,

QCI has had a particularly productive quarter from July to September 2021. Today we have created a robust mechanism to solve problems using cutting edge technology and provide high-quality services to our clients across the country. QCI has been extremely effective in achieving its goal of developing a quality eco-system in India. Our engagements with Ministries across sectors have become more extensive in scope and scale, and we expect this trend to continue in the years to come.

During this quarter we launched a new award, Prof. S.K. Joshi Laboratory Excellence Award, which has been instituted to promote Laboratory Quality and Performance Improvement in the country. This is India's first-of-its-kind Laboratory Excellence Award. The award has been instituted to ensure laboratories' commitment to achieve excellence in providing high precision testing & calibration services in line with the prevalent national/international quality systems legislations including Health, Safety & Environment. This Award will also encourage other upcoming laboratories to improve their quality of processes & services.

On World Tourism Day, the Ministry of Tourism launched a new portal, NIDHI (National Integrated Database of Hospitality Industry), which we helped develop. A technology-driven system, aligned with the vision of Atmanirbhar Bharat, NIDHI will help create a comprehensive, real-time map of the hospitality ecosystem in India, detailing its size, structure and existing capacity, among other things. We believe this portal will be a game-changer for the industry as it will facilitate the provision of various services to the industry through campaigns like SAATHI and Star Classification, enable sharing of best practises and serve as a seamless interface connecting the Government of India, the hospitality and tourism industry and tourists.

During this quarter, we hosted five Virtual Quality Conclaves (10th, 11th, 12th, 13th & 14th), in partnership with the PHD Chamber of Commerce and Industry, on varied themes: Environment and Climate Change; Drone Sector: A way to Quality; Improving Credibility of Learning Service Provider (LSP) through Accreditation; Protection of Child Rights: Towards a Brighter Future; and Accreditation Schemes for Ground Water and Exploration & Mining Plan Consultant Organizations. Insitutions like GIZ, SDMC and Horticulture Department also supported these conclaves, which brought together a diverse set of viewpoints and approaches to the subject of continuous quality improvement through the examination and use of best practises.

To commemorate #AzadiKaAmritMahotsav, one of the pillars of the celebrations for Resolve@75, QCI planned Fit India Freedom Run 2.0 to encourage its employees to include at least 30 minutes of physical activity in their daily routine.

We launched the 3rd edition of Quality Champion Award, which honours outstanding individuals who have demonstrated significant contribution in the field of quality (for example outstanding promotional activities, innovation in approach, promotion, effective application of quality tools etc.) in any sector. The 14th edition of QCI - D.L. Shah Quality Award has also been launched that recognizes successful projects of an organization that have resulted in continuous improvement of products and/or services, better and effective operations as well as increased customers/stakeholders satisfaction.

We are delighted to share that we have signed an MoU with Food Corporation of India (FCI), whereby we will undertake third-party certification of food grains procured, stored, and distributed for fair assessment. We will review and upgrade existing standards' system to introduce the best global practises and introduce end-to-end digitisation and traceability across the supply chain. We believe our partnership with FCI has the potential to improve health and nutrition outcomes for 67% of India's population which buys subsidised ration.

We are steadfast in our commitment to foster and mainstream a quality-driven mindset, which we believe is critical to realizing the vision of Atmanirbhar Bharat. We will continue to expand our engagements with Ministries and work in collaboration with various stakeholders to solve problems at start-up speed and government scale.

*We wish all our readers a very happy and prosperous Diwali!*

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## Prof. S.K. Joshi Laboratory Excellence Award

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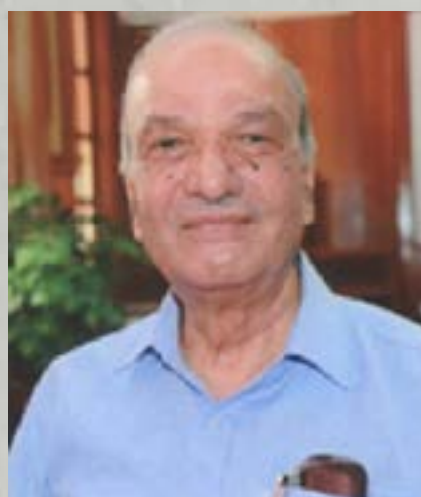
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# Prof. S.K. Joshi Laboratory Excellence Award



He studied at the Allahabad University and completed his Ph.D. in Physics, specializing in Condensed Matter Theory. He was one of the few Indian scientists to have contributed a Chapter in Solid State Physics, published by Academic Press in 1968 on Lattice Dynamic of Metals. For his outstanding work, he was awarded with prestigious Shanti Swarup Bhatnagar Award (Physical Sciences) in 1972 and Meghnad Saha Award for Research in Theoretical Sciences in 1974.

Prof. Joshi made a significant contribution in improving scientific research in India by serving as the Secretary/Foreign Secretary/President of INSA, DG-CSIR, Director-NPL and Chairman-NABL. It was the time that coincided with beginning of the economic liberalization in India and he successfully steered CSIR for the national scientific and technological needs. He guided leading institutions of the country through the Chairmanship of their apex Boards, including IIT Roorkee; Institute of Mathematical Sciences, Chennai; Institute of Physics, Bhubaneswar; Indian Association for Cultivation of Science, Kolkata; Recruitment Assessment Center (RACDRDO), Recruitment Assessment Board (RAB CSIR); Visvesvaraya National Institute of Technology (VNIT Nagpur); Inter-University Accelerator Centre (IUAC), UGC-DAE, Indore etc. He served as a member of the Scientific Advisory

Committee to GoI. He also served as Chairman of selection committees to select Directors and Vice Chancellors of many prestigious Institutes and Universities.

Prof. Joshi was felicitated with **Padma Shri (1991), CV Raman Medal of INSA (1999), Padma Bhushan (2003)**, and several other prestigious awards over his lifetime. He passed away on 15<sup>th</sup> of May of 2020.

## Prof. Joshi's association with NABL

Prof. Joshi was considerate and guided NABL as Chairman for many wonderful years. Under his able guidance, NABL evolved into a better organization and there was a major thrust on increase of NABL Accredited Labs in India. QCI will always be thankful for his inspiring and visionary leadership and his guidance on strengthening NABL's role in the quality infrastructure of the country. He had said, **"NABL's mission should be the upliftment of the National Quality as a backbone in accreditation"**.

## Laboratory Industry in India

The Indian Laboratory Industry grows at a steady rate of 13 to 14% each year. There are laboratories being accredited

each day and so ensuring Quality of the service provided by the laboratories is of foremost importance. The Laboratory results must be reliable, accurate and timely for them to be useful in the public health setting. Of course, when making any type of measurement, there is always some level of inaccuracy, but any laboratory's primary goal is to minimize the margin of error to arrive at maximum precision & reliability. Each one of us can gauge the massive consequences due to errors in laboratory testing.

India has been calibrating its testing strategy as per the changing paradigm, and taking into account the scope, need and capacity to rapidly scale-up tests performed each day across the

country. The pricing of Indian laboratory testing is very competitive as compared to developed countries. The quality of service provided and the experience of the workers is also par excellence.

The rapid growth of collection centres has facilitated testing to be available even in the remotest region of the country and the credit for making testing accessible in such areas go to small and medium laboratories which have been multiplying over the last decade. They are often involved in testing new products and are forever on a quest to achieve international standards of excellence.

## Objective for instituting this Award

The Prof. S.K. Joshi Laboratory Excellence Award has been instituted to promote Laboratory Quality and performance improvement in the country. This is country's first-of-its-kind Laboratory Excellence Award. The award has been incepted to ensure the laboratory's commitment to achieve excellence in providing high precision testing & calibration services in line with the prevalent national/ international quality systems legislations including Health, Safety & Environment. This Award is also to encourage other upcoming Laboratories to improve their quality of processes & services. Our motive is to





promote Quality standards for laboratory excellence extensively through this Award.

This award will be open to all currently operational Laboratories pertaining to Testing, Calibration & Medical including their Proficiency Testing Providers & Reference Material Producers located in India.

QCI wishes to pay a tribute to the exemplary Professor by continuing his legacy through this award named in his honour.

### Judging Criteria

The laboratories (accredited or not) applying for this Award will be judged on several parameters including:

- Management Commitment
- Strategies
- Processes
- Infrastructure & Quality Control Resources
- Customer Complaints, Feedback & Improvements
- Key Results/ Satisfaction

### Assessment Stages

The 5 stages of assessment by Technical Expert Committee are Application Document

Evaluation, Physical/Virtual Presentation, Site Assessment/ Verification, Reference check and Jury evaluation.

### Award Categories

There are three category of Awards that will be given to each of Medical, Testing & Calibration Laboratories based on the cumulative merit score.

- Three Gold Awards with a cash prize of INR 1 Lakh each with certificate & trophy.
- Three Silver Awards with a cash prize of INR 75,000 each with certificate & trophy.
- Three Bronze Awards with a cash prize of INR 50,000 each with certificate & trophy.

### Application Fees

There is no application fees, so we expect huge participation from laboratories across India.

**The application window is open till 16th November 2021. To apply, please visit [www.labexcellenceaward.qcin.org](http://www.labexcellenceaward.qcin.org)**

# Award Launch Event

QCI launched the Prof. S.K. Joshi Laboratory Excellence Award on 16th September 2021 virtually amidst eminent dignitaries from Government & Industry.



**MR. ADIL ZAINULBHAI**  
Chairperson - QCI

"The goal of this award is to locate India's best labs and to demonstrate to the rest of the world that our labs have the highest standards in the world."



**DR. RAVI P. SINGH**  
Secretary General - QCI

"We've taken several little measures toward enhancing the quality of labs around the country, and QCI has endeavoured to honour Prof S K Joshi's memories to celebrate excellence in lab ecosystem in the country."



**DR. SHEKHAR C. MANDE**  
Secretary - DSIR and DG - CSIR

Dr. Shekhar expressed his happiness for this award being launched in honor of Prof. S.K Joshi and said that in future, more organizations will be inspired to improve their quality assurance and quality control.



**PROF. (DR.) R. K. KOTNALA**  
Chairman - NABL

"Through its boards, QCI strives to improve the lives of ordinary residents by promoting quality and standards. It is also important to adopt the best quality system at every stage of life."



**MR. SUNIL MATHUR**  
Chairman - NBQP

"The Award commends the lab's commitment to achieve excellence by providing precision testing and calibration services that follow the national and international legislations".



**PROF. (DR.) RANJANA AGGARWAL**  
Director, CSIR-NIScPR

Prof. (Dr.) Ranjana remembered Prof. S.K Joshi as an excellent science communicator and leader who inspired a new generation of scientists and researchers to help India achieve worldwide success.

Other distinguished personalities who graced the occasion were: Prof. (Dr.) Venu Gopal Achanta (Director-NPL); Dr. B.K. Rao (Chairman - NABH); Mr. Girish Krishnamurthy (CEO & MD -Tata Medical & Diagnostics Ltd.)

**Compiled by Prasoon Mishra**  
Assistant Director, NBQP, QCI



Media  
CoverageProf. S.K. Joshi  
Laboratory Excellence Award





## Updates from Project Planning & Implementation Division



### National Program/Project Management Policy Framework (NPMPPF)

#### The Mandate: Introducing a Common Language of Program/Project Management in India

A Task Force on Program and Project Management was constituted by NITI Aayog which laid out the need for a National Project / Program Management Policy Framework to prepare short-term and long-term strategies for improving Project and Program Management practices and align them with the global best practices. The initiative aims to introduce a common language in the profession of program & project management across all stakeholders.

Taskforce on Program and Project Management gave a dual mandate to the Quality Council of India to collaborate with NITI Aayog to:

#### Develop the National Policy Framework

- To envision the development of the profession in India and recommend industry best practices to enable the adoption of Program management.

#### Develop an Institute for Program Management in India

- Create the framework for structuring and functioning of the National Institute of Chartered Program/Project Professionals (NICPP).
- Create a technical baseline (The Indian Infrastructure Body of Knowledge): The InBoK will serve as the ultimate Indian standard for the profession and its practice.

- Develop operational guidelines for training and certification

#### Executing the Mandate

- A Steering Committee was constituted to guide the overarching mandate, which culminated in the establishment of a Technical Committee to deliver an operational framework for certification and the institute and setup the Technical Baseline- Indian Infrastructure Body of Knowledge (InBoK), which forms the cornerstone of NICPP Certifications.
- Under the Technical Committee, a 4-Level National Certification System in Program & Project Management is envisaged based on InBoK, links program/project professional's competence with project complexity. This certification system shall be housed under "National Institute of Chartered Program and Project Professionals (NICPP)" and it shall be the nodal institute for program/project management in India. The NICPP shall be housed in QCI.
- The Technical Baseline shall be leveraged to build capacity and upskill within government and PSUs, and increase awareness of the benefits of Program Management approach.

#### A National Launch for the NPMPPF Initiative and Unveiling the InBoK

NITI Aayog and Quality Council of India jointly launched the 'National Program and Project Management Policy Framework' (NPMPPF), envisaged to bring radical reforms in the way infrastructure

projects are executed in India. This culminated in the unveiling of the InBoK by Union Minister Nitin Gadkari along with Union Minister Piyush Goyal.

#### Current Status

- The Technical Baseline- the InBoK underwent two rounds of detailed review by external experts from academia and the industry, and is now currently under publishing.
- The Training Modules and Question Bank for the final NICPP examinations are under development.
- We are currently gearing towards testing the Examination Portal to kickstart Certifications in Program and Project Management.
- The NPMPPF is also being engaged to explore opportunities in Training project and program managers of large infrastructure projects.

### Ayushman Bharat PMJAY Quality Certification

India is one of the fastest-growing economies where more than 20% of its population still lives under the poverty line. To cater to their healthcare needs, the Government of India (GoI) launched its flagship scheme, Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PMJAY) on the lines of Sustainable Development Goals (SDG3). One of the important healthcare policy concerns in India today is the 'Quality' of healthcare services offered in the country. Keeping

in mind these rising concerns, the Quality Council of India (QCI) and the National Health Authority (NHA) have together sown the seed of change in healthcare certifications across India by launching a unique digital certification initiative called AB PMJAY Quality Certification for hospitals. This certification consists of three levels of certificates – Gold, Silver and Bronze. As the name suggests, the Gold Quality Certification is the highest level of certification. The hospitals with Joint Commission International (JCI) Gold Standard Certification or the National Accreditation Board for Hospitals and Healthcare Providers (NABH) Accreditation, can apply for Gold Certification. The Silver Quality Certification is the second level of certification where the hospitals with National Quality Assurance Standards (NQAS) and NABH Entry Level Certification can directly apply. The hospitals that do not hold any certification can apply for the Bronze Quality Certification.

### Third Party Quality Assessment of Coal

There are various types of coal found in India and respectively they are used for processes like power generation, steel manufacture, cement manufacture, paper manufacture, syngas generation etc. Coal India Limited (CIL) – the largest coal producing company in the world; responsible for over 80% of coal production in India, are also involved in its sales process. Over the years of its service, CIL noticed that there were disputes arising over the quality of coal.



It was striving to bring in transparency & accountability in the entire production and sale process for all and as a solution to this, “Third Party Sampling, testing & analysis of Coal” was introduced in 2016. The process of Third party sampling (TPS) provides a transparent mechanism to scrutinize the quality of coal dispatched to Consumers and to curb any disputes arising over the same.

Quality Council of India (QCI) stepped into Third Party Sampling on 9th August 2017, with an aim to provide a holistic quality determination and monitoring system for coal supplies to consumers. Initially, QCI started with facilitating independent sampling services to a part of the Power and Non- Power consumers. By the end of 2020, we attained the access to provide TPS to all the Power and Non- Power consumers present in the coal ecosystem. A total volume of more than 250 Million Metric Tonnes has been sampled till date. Currently with a manpower of more than 1200; we are present at 200+ locations across India. We are working with Coal India Limited (CIL) and its 7 subsidiaries along with North Eastern Coalfields providing “Third Party Sampling of coal” to 200+ Power & Non- Power consumers. We have also taken tech initiatives like developing QR code technology for double binding of samples, Live monitoring of coal sample, Mobile applications & web portals for multiple stakeholders.

## Third Party Testing of Fisheries For Presence of added

## Formaldehyde in Fish

Government of Goa along with Minister of Commerce and Industry, were looking for a solution to detect and destroy adulteration of fresh fish imported into Goa using unapproved chemicals and additives such as added formaldehyde, ammonia, sodium benzoate by fish traders and suppliers. The presence of added Formaldehyde in fish being a serious threat to the health and safety of the consumers, there was an urgent need to introduce necessary reforms in the fisheries ecosystem to ensure quality products, to create an ecosystem where such instances, if they occur, are detected and prevented before it reaches the consumer.

QCI was nominated by FDA Goa for “Third Party Testing and Analysis of added Formaldehyde in Fisheries” to check the presence of added formaldehyde. The objective is to provide the unadulterated fish for a healthy life to each individual in state of Goa. QCI has screened around 91165 fish carrying vehicles since June’19 to check the presence of added formaldehyde in fisheries.

## Swachh Survekshan 2021 – Urban

Swachh Survekshan, a flagship project of Ministry of Housing & Urban Affairs (MoHUA), began in 2016 with a humble number of 72 ULBs. After six years of knowledge filled and constantly progressive journey, we stand at a total of assessing 4320 ULBs. In its journey of six years, the driving force

of Swachh Survekshan has been to make the common citizens aware of its objectives towards a clean country, therefore, enabling a large-scale citizen participation and, in turn, meeting the idea of ‘Jan Andolan’.

Elements	SS2021	SS2020
Participating ULBs	4320	4242
Citizen feedback collected	3.95+ Cr	1.9+ Cr
Total social media impressions	700+ Mn	112+ Mn

Swachh Survekshan 2021 is the World’s Largest Cleanliness Survey; the year-on-year growth in the quantum of survey is highlighted in the above table. The survey was conducted by 1500+ on-field assessors and a project management team of 230 professionals.

### Some noteworthy innovations in the projects have been the following:

- In SS21, we introduced the concept of ‘Batmen’ as a measure to check the ethics of the on-field assessors. Through this effort, we were able to reduce the unethical practices carried out by the assessors.
- We innovated the training methodology by conducting online classroom training and on-field training on related infrastructure which ensured seamless assessments.

The results are yet to be released by MoHUA. Additionally, MoHUA has entrusted QCI to conduct the Quarter 1 and Quarter 2 Citizen validation for Swachh Survekshan 2022.

## Safaimitra Suraksha Challenge 2021

A National level competition titled “Safaimitra Suraksha Challenge (SSC)” in 246 ULBs across India was launched by MoHUA on 19th November 2020, on the occasion of World Toilet Day. The objective of the SSC is to encourage more cities and towns to adopt Mechanized Cleaning of Sewers and Septic Tanks as a practice, and act as Lighthouse for other cities in this regard. It is hoped that going forward, no further deaths will occur of vulnerable sections of society by indulging in acts of hazardous entry. The challenge also aims to bring in a sense of pride and reinforce the need for safety across all Safaimitras engaged in cleaning practices.

The on-field assessment of SSC from 2nd October to 31st October 2021 was announced on 27th September by Shri Hardeep Singh Puri, Hon’ble Minister of Housing and Urban Affairs.

## PM SVANidhi se Samriddhi: Socio Economic Profiling of Street Vendors and their linkage to Schemes

The ‘Pradhan Mantri Street Vendor Atmanirbhar Scheme 2020 (PM SVANidhi)’ was conceived by the Ministry of Housing and Affairs (MoHUA) developed with

three objectives in mind:

- Facilitating working capital of maximum 10,000 INR
- Incentivizing Regular Repayments
- Digital transaction rewards to the vendors.

All street vendors engaged in urban areas as on or before March 24, 2020 were to be eligible for the scheme. In order to take the work done with street vendors forward, SVANidhi Se Samriddhi was started with an aim towards the socio-economic profiling and scheme linkages of street vendors who are beneficiaries of the SVANidhi program. This program has been rolled out in 127 ULBs and is to be completed by March 2022.

QCI has been engaged by MoHUA to conduct the socio-economic profiling and scheme linkages exercise for these SVANidhi beneficiaries and their families. This is a one-of-a-kind project that has evolved, with respect to scoping & functionality. QCI team’s agility was one of the key factors in mobilizing these changes in no time.

### Engagement of QCI in Phase 1:

- Developed the methodology for “Socio Economic Profiling” and linkages for 8 central schemes
- Provided hands on training to the ULB officials and CLNOs for 200+ man hours
- Developed the technology platform (web & mobile application) for profiling and checking the eligibility of the vendors and their family members and linkages with eligible schemes with the help of CLNOs Logins. Developed user portals for different stakeholders for all 9 contributors

- Visual dashboard available to public gives the overall summary along with the map feature with accuracy of up to the ULB level (average clicks)
- Regional Coordinators (RCs) provided the support (query resolution, on-call training) to all the stakeholders that were part of profiling and scheme linkages, they also provided them with best practices that they can adapt during data collection
- Motivating the ULBs and CLNOs for profiling and scheme linkages in order to reach maximum beneficiaries
- Report and Data analytics- Monthly reports and other analysis such as profiling status, scheme related analysis and Food vendor’s details etc.
- Day to day analysis such as camp status, profiling status, scheme related analysis and food vendors details etc. as and when required

## QCI’s Engagement in Phase II

The objective of the project is to further assist the Ministry of Housing and Urban Affairs (MoHUA) in preparing the socio-economic profiles and scheme linkages for PM SVANidhi beneficiaries (street vendors) and for additional beneficiaries along with their family members in more than 4500 ULBs of India (including the 127 ULBs of Phase 1) till July 2022.

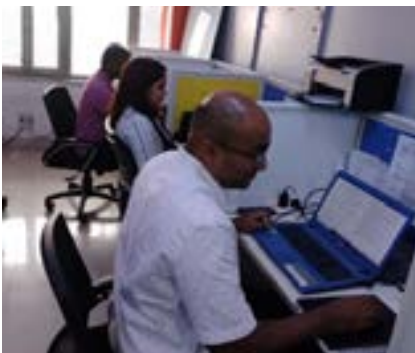
### Achievements for the Phase 1:

1. Conducting the socio-economic profiling of SVANidhi Se Samriddhi beneficiaries and their families in 127 ULBs.





- 2. Till 30th September 2021, 6,75,417 street vendors have been profiled
- 3. Total profiling has been completed for 16,85,205 beneficiaries which includes both street vendors and their family members
- 4. There have been a total of 8,98,172 scheme application to 8 eight separate central schemes out of which 7,29,381 applications were given sanction as of 30th September 2021.
- 5. Digital workplace: QCI team are working in 2 different locations with one located at the PMU in MoHUA and other at the QCI office at the ICCW building. Close coordination within the team is ensured by proactive use of video conference technology such as Microsoft Teams for daily meetings
- 6. Relevant documentation: QCI team has been providing regular and upto date documentation on performance reviews of the schemes which becomes part of evidence based recommendations for improvements related to the system.



ALIMCO

ALIMCO (Artificial Limbs Manufacturing Corporation of India) is a Non-Profit Organization working under Department of Persons with Disabilities, Ministry of Social Justice and Empowerment, Government of India. ALIMCO manufactures variety of aids and appliances for different categories of disability. Its Manufacturing Unit and Head Office is located in Kanpur, Uttar Pradesh.

QCI has been associated with ALIMCO from past three years, assessed 13 fast moving products quarterly in the financial year 2018-19 and 16 fast moving products quarterly in the financial year 2019-20. In the financial year of 2020-21 assessment aimed for 16 products and till date we have successfully completed first and second quarter on-site assessment for Phase III in the month of February’21 & July’21 respectively. The final report of which has been successfully submitted to ALIMCO Kanpur. The third and fourth on-site assessment will be planned in November’21 & February’22 respectively. The on-site assessment is carried out at their manufacturing site, Kanpur (U.P.).

The objective of the assessment is to evaluate the final products on the basis of Indian Standard (IS), ALIMCO specifications and drawings and to help ALIMCO to identify gaps of improvement in quality and functional performance of products.

ALIMCO showcases its exemplary work being the only manufacturing organization catering to all type of disabilities across the country. During the on-ground assessment, it was also noticed that ALIMCO has taken prompt actions pertaining to the recommendations submitted by QCI. Moving upward, the organisation

should pace forward with steady steps to upgrade the existing processes and overall increase the productivity levels of the organisation with a futuristic vision.



FSSAI Food Survey

It is of absolute pertinence to acknowledge the threat posed by trans-fats on the health of the population and take requisite and swift actions to eliminate the industrially produced trans-fat within the time limit of the year 2022 prescribed by FSSAI.

In a venture to make India a trans-fat free country, Food Safety and Standards Authority of India (FSSAI) has mandated to reduce the limit of industrially produced trans-fats to not more than 2 per cent to make the country free from the industrially-produced trans-fats by 2022, a year-ahead of the WHO guidelines.

In order to ascertain compliance of the limits set by FSSAI, a survey on the prevalence of trans-fat was proposed by the Food Authority in 2021. FSSAI partnered with Quality Council of India (QCI) to conduct an unprejudiced market survey across India for trans-fats and acrylamide content in samples from pre-determined food product categories.



The survey was carried out to perceive the ground realities of the Indian food markets from varied socio-economic neighbourhoods and the selected cities across the nation. Samples of various packaged food items under six pre-defined food categories were collected from 419 cities/districts across 34 States/UTs. In total, 6,245 samples of packaged products were collected from Indian marketplaces on a random basis to ensure diverse and local packaged food sampling from different strata of food markets. All of the samples were

analysed for trans-fat, while half of the total samples were analysed for acrylamide content.

From the concluded survey, it was



observed that out of the total 6245 samples analysed for total trans-fat

content across all the six categories, about 3.14% of samples contained trans-fat exceeding 2%. About 90% of the 196 samples that exceeded 2% trans-fat belonged to the category 6 (Oils, Vanaspathi, Shortenings and Margarine).

In addition, from the total samples tested for acrylamide content, only 0.32% of the samples had more than 2 ppm

acrylamide content. However, about 22% of the total samples spanning across the three product categories had more than 0.1 ppm of total acrylamide content.

In a vision on moving forward, the food manufacturers will be recommended to strive ahead taking positive steps to ensure elimination of industrially produced trans-fat in foods by 2022 and also ensure that the labelling of the food items by Industries/manufacturers to be accurate and veracious with regards to the trans-fats content. More manufacturers should be encouraged to use ‘Trans-Fat Free’ claims on the food items to ensure customers assurance on the brands.

The findings of the Survey revealed that the Food Processing Industry is positive about FSSAI’s regulation for eliminating the



industrially produced trans-fats in foods by 2022. The survey results demolish the perception of excessive usage of industrial trans- fat in processed food products. This study has shown that India is well set to achieve its mandate of eliminating industrially produced trans fats by 2022.







## Updates from Project Analysis & Documentation (PAD) Division



## Voluntary Certification Schemes

### Voluntary Certification Scheme for Medicinal Plant Produce (VCS-MPP)

QCI, at the behest of National Medicinal Plant Board (NMPB), GoI had developed and designed a voluntary certification scheme for medicinal plant produce. The aim of VCSMPP is to introduce Good Agricultural Practices (GAP) and Good Field Collection Practices (GFCP) for medicinal plants to enhance confidence in the quality of India's medicinal plant produce among the buyers and consumers.

GAP training workshop was organised in Bageshwar, Uttarakhand which focused on sensitisation of 120 farmers on good agricultural practices. GFCP training workshop was organised in Dumri, Jharkhand.



GFCP training workshop at Dumri, Jharkhand



Group activity during the GAP training workshop at Bageshwar, Uttarakhand

## India Good Agricultural Practices (IndG.A.P.) Scheme

QCI realizes that the best way to improve the prospects of agriculture in the country is to address food safety, workers health and safety, environment management, and quality of produce. For this, QCI came up with the IndG.A.P. Scheme that not only assists the big farmers but also helps the smallholders to practice good agricultural practices in their farm.

The projects – 'IndG.A.P. benchmarking project (granted by APEDA)' and 'pilot project for certification of spices (granted by Spices Board)' are in the implementation stage.

SAARC GAP Training was organised with SAC and a training manual has been submitted. First TC meeting and first CC meeting of IndG.A.P. was conducted wherein the name of the scheme has been changed from IndGAP to IndG.A.P.



First Technical Committee Meeting of IndG.A.P.



First Certification Committee Meeting of IndG.A.P.

## Hygiene Rating Scheme of FSSAI

Scheme for approval of hygiene rating audit agencies (HRAAs) was developed with an aim to help consumers make informed decisions regarding food outlets where they prefer to eat by encouraging businesses to improve hygiene and safety standards. The recognised agency will verify compliance with food hygiene and safety procedures laid down by the Food Safety and Standards Authority of India (FSSAI).

3 agencies have been recognized and a total of 23 applications are under process of approval.

## Certification Scheme for Remotely Piloted Aircraft Systems (RPAS)

QCI had launched the Certification Scheme for Remotely Piloted Aircraft Systems (RPAS), duly approved by the Directorate General of Civil Aviation (DGCA), Ministry of Civil Aviation, the regulator for RPAS, on 17 September 2020 in presence of Shri Amber Dubey, Joint Secretary, Ministry of Civil Aviation.

Third Technical Committee meeting conducted on 20th July 2021. VQC on Drone Sector was conducted on 23rd July 2021 as a training program on RPAS Scheme for manufacturers, certification bodies and other industry stakeholders.

QCI has been mandated through Drone Rules 2021 to recommend standards to the Central Government and issue certificate of compliance, under the Certification Scheme for Unmanned Aircraft Systems, as a prerequisite for the issuance of type certificate by DGCA.



Sh. Amber Dubey, JS, Ministry of Civil Aviation, addressing the participants during the Virtual Quality Conclave on drones sector



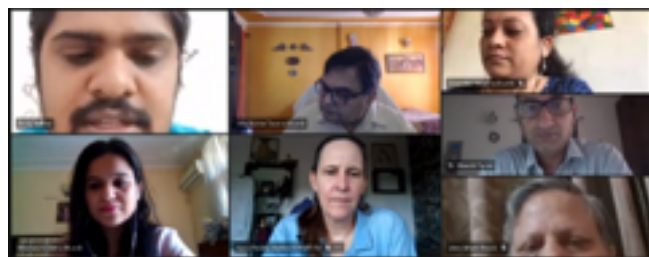


## Projects

### International Crops Research Institute for The Semi-Arid Tropics (ICRISAT)

ICRISAT had awarded QCI a project for design and development of Smart Food Certification Scheme. MoU was signed with ICRISAT for design and development of certification Scheme on 'Smart Food' by Dr. Jacqueline d'Arros Hughes, Director General and Dr. Ravi P. Singh, SG, QCI.

Scheme documents of Voluntary Smart Food Certification Scheme (VSFCS) have been designed.



Brainstorming session on Voluntary Smart Food Certification Scheme (VSFCS)

### Ascertaining child labour in Indian industry in coordination with National Commission for Protection of Child Rights (NCPCR)

13th VQC on the theme: 'Protection of Child Rights: Towards a better future' was conducted on 26th August 2021 to explore the emerging 'best practices'.



13th VQC on Protection of Child Rights

### Development of Conformity Assessment Systems and Resources for protection of CII for NCIIPC

Agreement was signed between QCI and NCIIPC on 19th Feb 2021 for development of conformity assessment framework for strengthening cyber security in critical information infrastructure in power sector.

Under the Chairmanship of Dr. Gulshan Rai, Former National Security Advisor, Steering Committee of NCIIPC was held.

1st set of deliverables for conformity assessment framework have been submitted.



Steering Committee Meeting of NCIIPC Project

### NGCMA GLP Cell

National Good Laboratory Practices Compliance Monitoring Authority (NGCMA) entered into an MoU with the Quality Council of India on 31 Dec. 2013 for the effective implementation of Good Laboratory Practices (GLP) certification programme. PADD assists the GLP program of the NGCMA.

Total of 7 GLP inspections were conducted during July'21 to September'21. 4 GLP scope extension, 4 new applications and 3 re-certification applications were received for GLP certification during July'21 to September'21.



Training Course for Study Directors of GLP Test Facilities

## Participation In Vanijya Utsav - Azadi Ka Amrit Mahotsav

On the occasion of 'Azadi Ka Amrit Mahotsav' on 75 Year of India's independence, PADD, QCI participated in the 'Vanijya Utsav' organised by APEDA at Rudraksh International Cooperation and Convention Centre (RICCC) in Varanasi. It was addressed by Smt. Anupriya Patel, hon'ble Minister of State for Commerce and Industry, GoI, Shri Ravindra Jaiswal, MoS Independent Charge Ministry of Stamp & Registration (U.P. Govt.) and Dr. M. Angamuthu, Chairman, APEDA.

#### The activities were:

- Capacity building programme & trade meet for FPOs/ farmers & exporters.
- Exporters Conclave

It was aimed to disseminate agri-export related information and opportunities to farmers. It witnessed a whopping participation of 1100+ at the venue and 4000+ virtually.



Dr. Manish Pande, Director & Head of PADD, QCI, addressing the stakeholders



Dr. M. Angamuthu, Chairman, APEDA addressing the farmers, FPOs & other stakeholders



Participation of farmers, FPOs and exporters in the Vanijya Utsav







## Updates from Zero Defect Zero Effect (ZED) Division



## Ministry of Tourism launches 'NIDHI 2.0' at World Tourism Day Celebration Event

The Quality Council of India (QCI) has been assisting the Ministry of Tourism in improving the ecosystem for the Hospitality & Tourism Industry of India. Through SAATHI (System for Assessment, Awareness & Training for Hospitality Industry), the hospitality industry was made aware of the precautions to be taken while restarting and continuing operations in their hotels. So far more than 10,000 accommodation units in India have self-certified themselves on SAATHI.



The upgraded NIDHI portal was launched on September 27, 2021 at the World Tourism Day at Hotel Ashok, New Delhi.

On this occasion, the Chief Guest and Hon'ble Speaker of Lok Sabha, Shri Om Birla, while launching NIDHI (National Integrated Database of Hospitality Industry) said that Information Technology should be proactively used to promote tourism at domestic & international levels and hoped NIDHI 2.0 database will be a milestone in this endeavour.

NIDHI is a technology driven system, aligned with "Atmanirbhar Bharat", to get a clear picture on the geographical spread of the Hospitality Sector, its size, structure and existing capacity so as to offer relevant services to the Hospitality Industry like SAATHI, Star Classification etc., under NIDHI.

This initiative is now being upgraded and aligned with the National Digital Tourism Mission in order to have more inclusivity, that is, of not only Accommodation Units, but also Travel Agents, Tour Operators, Tourist Transport Operators, Food & Beverage Operators, Online Travel Aggregators, Convention Centres and Tourist Facilitators amongst others. The new system also envisages a larger role of the State Governments and Union Territories apart from our Industry Associations and other stakeholders.

The main features of NIDHI include:

### Registration

The idea is to register maximum stakeholders on NIDHI, hence a simple registration form for tourism & hospitality service providers is being created.

### Showcasing of facilities/services (of registered entities)

Registered entities will have an option to showcase the facilities and services they provide. The information provided will be published after appropriate validation.

### SAATHI Quality Certifications and other services

Registered Entities will be able to avail relevant services like COVID-19 Certification, Hotel Classification, Recognitions, Approvals and other services that will be made available from time to time.

### Listings

Option for relevant listing of registered entities will be provided. For example, SAATHI COVID-19 Certified Accommodation Units may be listed on Online Travel Aggregator's platform OR Hotels may be listed on Incredible India etc.





### Integration with stakeholders

Provision will be made for various stakeholders, like Ministries, Authorities, State Governments to integrate with NIDHI via API.

### Integrating 3rd Party assessment mechanism

Provision for 3rd Party assessment will be made for various services like Star Classification, Quality Certifications, relevant recognitions, approvals etc. to provide enable faster, unbiased and app-based services.

### End-to-end digitalized systems

The NIDHI Architecture is aligned with the vision of Hon'ble Prime Minister and the National Digital Tourism Mission. The system is based on open-source technologies and will be interoperable. There will be provision for open APIs for other systems to integrate and will have appropriate enterprise level security & data privacy

Hon'ble Lok Sabha Speaker, Shri Om Birla, delivered the keynote Address at the programme "Tourism for Inclusive

"The tourism sector is one of those few sectors which have suffered a lot due to this pandemic and the early resumption of tourism is very important for the recovery and growth of this sector. With the ongoing aggressive vaccination strategy, we are now a step closer to the reopening of the country to tourism in the beginning of the new year. I am grateful to the Prime Minister Shri Narendra Modi for his relentless focus on vaccination".

-Union Tourism Minister,  
Shri G Kishan Reddy

Growth" organized by the Ministry of Tourism, Government of India, to mark the World Tourism Day, 2021.

Union Minister of Tourism, Culture & DoNER Shri G. Kishan Reddy and MoS for Tourism Shri Shripad Yesso Naik also graced the occasion while a video message of Secretary General, WTO, Shri Zurab Pololikashvili was also played. Secretary Tourism Shri Arvind Singh; DG Tourism, Shri Ganji Kamala Vardhana Rao; Head UNEP, Shri Atul Bagai; senior officers of the Tourism Ministry and representatives of travel and hospitality industry also addressed on the occasion.

This initiative by the Ministry of Tourism is poised to be a game changer for the industry by not only serving as a platform for the Hospitality & Tourism organizations to ideate, share best practices and connecting with the Government for ease of doing business but also by acting as an interface between the Government, the hospitality & tourism industry and the tourist. This will not only assist in the generation of information for policy decisions, HR requirements, disseminating disaster/health and safety protocol, but will also help in creation of jobs.

-Team ZED



### Updates from Training and Capacity Building (TCB) Cell

Training and Capacity Building (TCB) cell has widened its horizon since it came into being and has catered to bridging the existing skill gap between professionals, students and the industry by acquainting them with emerging skills and imparting knowledge on existing ones.

TCB has been organizing instructor-led virtual trainings exclusively for the employees of government and private organizations. The trainings are sought after as they are conducted in real time by industry



### TCB's Domains of Capacity Building Intervention

experts, are cost effective and encourage knowledge retention through interesting visuals and interactive sessions.

eQuest, the eLearning platform of TCB, offers 50+ courses catering to a variety of domains that are built for professionals to improve their skills further and/or refresh their concepts. The platform acts as a catalyst for the enhancement of employability opportunities for professionals, which can be accessed anytime and anywhere.



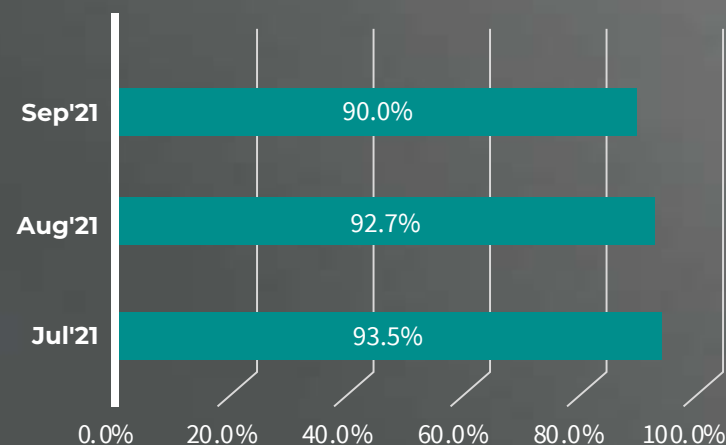
In this period, about 681 learners have registered with eQuest and about 415 have successfully concluded their courses and have been awarded competency/ participation certificates.

## Words That Speak As Loud As Actions: Testimonials

"I would recommend this workshop for all medical lab professionals. This training is very effective and improves the knowledge about the medical lab systems. Thanks to the whole team" - Dr. Vidhya Srinivasan.

"The training is excellent, beyond my expectations. The faculty who took the sessions were phenomenal. The other supporting staff also were exceptional. The content was delivered in the right pace and was easy for the beginner to understand and learn and implement" - Dr. Shyam Prasad. B. R

Feedback Score



The training was very interactive though it was virtual training. All clauses were very well explained and also the standards information given was very much informative to us" - Janhavi Lokhande.

"Training on 'Uncertainty of Measurement and Decision Rule as per ISO/IEC 17025:2017 was very fruitful. It provided innovative proficiency for handling Decision rule as per ISO/IEC 17025. Training reminisced the methods for estimation of uncertainty during calibration / testing. Thanks to the TCB Team of QCI" - Arumugham V.

"Very much informative and useful to carry out day to day activities being a NABL accredited laboratory. Faculty members are fantastic. " - MK Raina

### Capacity Building Intervention in Various Domains

It has been about year and a half since its inception and the cell has witnessed a staggering response from participants coming from India and across the globe. In this quarter, about more than 957 professionals attended instructor-led

training in various domains offered by TCB and awarded certificates.

These trainings catered to a range of professionals and were attended by officials from the Conformity Assessment Bodies from India and abroad, government, regulators, consultants etc.

### Training on Accreditation & Certification Standards

In the July to September quarter of 2021, TCB continued with conducting multiple instructor led training on a variety of topics like –

- Requirements of ISO/IEC 17020:2012 for Inspection Bodies.
- Laboratory System & Internal Audit as per ISO/IEC 17025:2017
- Medical Laboratory System & Internal Audit as per ISO 15189: 2012
- Uncertainty of Measurement & Decision Rule as per ISO/IEC 17025:2017
- TCB announced a new training on "ISO/IEC17025:2017- Risk Management requirements & implementation in Laboratories". The training on this topic will be conducted for the first time and scheduled in the month of November 2021.

### Training on Quality

Training on Lean Six Sigma Green Belt Certification

- On 14 August 2021, TCB successfully concluded a 3-day instructor led training of the 2nd batch of Lean

Six Sigma Green Belt Certification. The course is based on the American Society for Quality's (ASQ) Body of Knowledge (BoK). The training is offered in online mode imparting thorough understanding of various topics of BOK by an industry expert and a certified Six Sigma professional. It also involved live demonstration of tools and techniques to strengthen understanding of key concepts.

- 'Lean Six Sigma Green Belt Training and Certification' is awarded to people who successfully complete and pass the examination.

- Second batch witnessed an astounding response; thus, we scheduled our third batch of instructor led training in the month of October 2021.

eLearning courses available on eQuest

Quality being the core of our organization, we extend an array of eLearning programs available on eQuest that are related to the domain of quality and cater to professionals to enhance their skills sets. These programs mentioned below have been

well received by the professionals and students

- Total Quality Management (TQM)
- Total Productive Management (TPM)
- Introduction to 5S and Kaizen
- Manufacturing Competitiveness
- Process Capability Measurement (PCM)
- Introduction to Advanced Product Quality Planning (APQP)





## Capacity Building Training on Management Topics

TCB continued to schedule diverse instructor-led training in the domain of General Management for participants across various professions.

In this quarter, TCB explored the area of Digital Marketing and offered an introductory training. A session on Social Media Marketing for Businesses was organised for an in depth and advanced understanding of social media and ways to use it for marketing.

We further widened our area of scope and extended the training on Measurement & Analysis; a necessary infrastructure for MSME's.

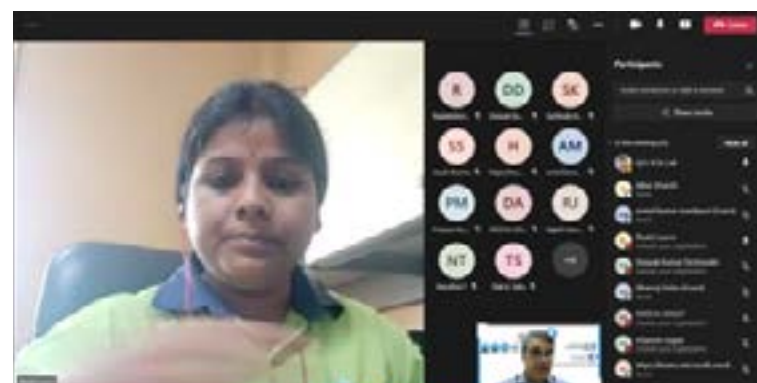
We also conducted trainings for Science and Art of Decision Making, Organizational Values, Ethics & Office /Workplace Etiquettes, Cost of Quality Anti-Fraud Control & Fraud Risk Management.

## Government/ Private Organization's Strengthening Trust on TCB: Exclusive Trainings

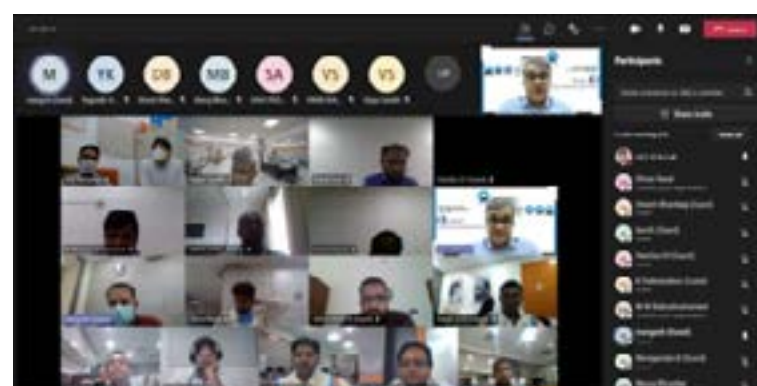
Various public and private organizations have entrusted TCB with the responsibility of training their employees to enhance their knowledge on existing skill sets and gaining an insight on new related topics. In this Quarter, TCB has delivered instructor led virtual trainings on various standards to officials of private organizations such as:

Bharat Aluminium Company (BALCO) - Various officials of BALCO from different parts of India, attended the training the exclusive training on laboratory standards.

- Mitutoyo South Asia Limited
- BSCIC Certifications Private Limited



Virtual training exclusively conducted for the officials of BALCO

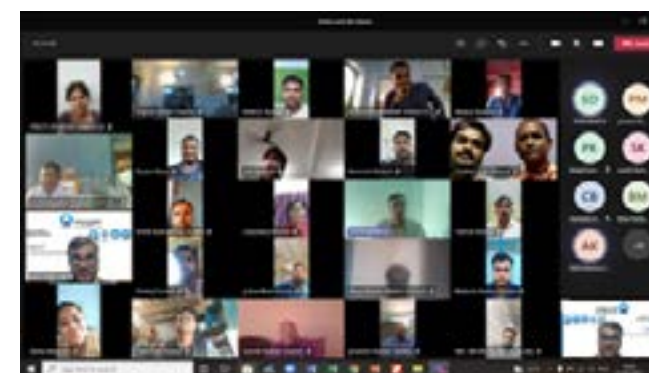


Officials of Mitutoyo attending the exclusive virtual training



Officials of BSCIC attending the exclusive virtual training on Values Ethics & governance

Apart from private organizations, over the span of a year, TCB has extended its training and capacity building services to government organizations. In the month of July, TCB has offered training to the officials of Drinking Water and Sanitation Department (DWSD), Jharkhand.



## eQuest/ QCI Association with 'SWAYAM' - An Initiative Of Ministry of Education

SWAYAM- is a program initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.

- We are associated with IIMB; the national coordinator for SWAYAM. Three batches of our eLearning course on "Continuous Quality Improvement: Tools and Techniques" (CQI) have successfully concluded. About 1726 students have registered for the 4th batch of CQI which commenced from 30th July 2021, and the examination for the 3rd batch was held on 29th August.

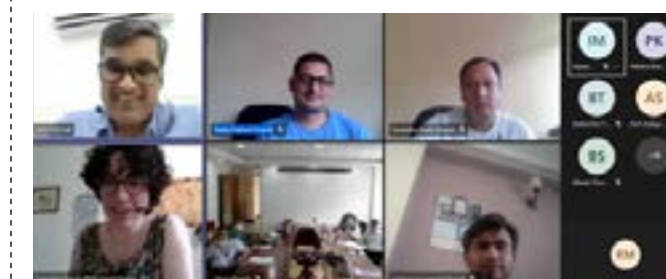


The fourth batch of QCI's course on Continuous Quality Improvement: Tools & Techniques has commenced

- Introduction of Total Productive Maintenance (TPM) by QCI on SWAYAM. The course has been approved by IIMB and the first batch will commence from January 2022. This is the third course of QCI to be available on SWAYAM website and it is a 4 credit-course under management category.
- Collaboration of IIMB & QCI - IIMB has confirmed QCI as the Supporting Partner for the IIMB SWAYAM courses and the same is being reflected on the SWAYAM website. QCI will provide learner support to IIMB Swayam courses and help in dissemination of learner information from time to time.

## TCB's engagement with National and International Stakeholders

- An exclusive 5-day instructor-led- training was conducted for officials of the Nepal Bureau of Standards & Metrology and Nepal Renewable Energy Test Station, Government of Nepal. Alok Jain, Director TCB, imparted the training to the officials. The training was financially sponsored by Physikalisch-Technische Bundesanstalt, PTB, Germany. The training was on Accreditation Standards for laboratories as per ISO/ IEC 17025:2017



Official of PTB extending vote of thanks

- Director TCB delivered a talk on "Quality Infrastructure and Accreditation" during the ongoing training course on 'Basics of Quality Control and Reliability' for Defence Research Technical Cadre and Administrative & allied cadre of DRDO



## Research Analysis and Capacity Building (RACB) Division

*Updates from Research Analysis and Capacity Building (RACB) Division*

The division has mandate to explore research and capacity building activities in the frontier areas in order to meet the goal of organization in the quality improvement initiatives covering each domain of human life. The division is working on various facts and has adopted collaborative approach to deliver real-time analysis of potential academic, environmental and research-oriented projects. RACB is jointly working with boards and divisions of QCI.



## Impact Analysis of Imprint-I

The division is conducting evaluation, data interpretation and analysis of progress reports of IMPRINT I projects sanctioned to academic and scientific institutions in the country under the MOE and DST grant support. Various ministries of the government have also supported the IMPRINT projects taking in-to account the relevance of the project with their core activities.

The current evaluation differs from our earlier scope of evaluation in terms of sampling and selection of projects. Under the on-going evaluation exercise, 50% of total un-evaluated projects left out during our first evaluation have been considered. A total of 57 projects have been evaluated and the impact analysis is under progress. The methodology for the evaluation of progress report of individual projects has been developed and investigation is under execution in order to rate the potential of projects towards their technological and commercial adoptability.

The on-going activity on IMPRINT I impact analysis since last couple of months is very rigorous. It is also to be mentioned that the analysis of the

on-going high-end research projects has resulted in to building of significant amount of skill and capability to the division in the field of impact evaluation and analysis of academic and research programs. The final summary and report preparation is in progress.

## Technical Education Quality Improvement Program

RACB division is working jointly with PPID since more than a year on Technical Education Quality Improvement Program (TEQIP) supported and

implemented by National Program Implementation Unit. The program is implemented in various technical institutions in the country with due support of World Bank.

## New Initiatives

The depicted proposals are submitted to various scientific and funding organizations. The discussion is under progress. There is a technical approval for one of the proposals; however, due to COVID-19, the finalization process is delayed. These proposals are largely attributed to research, technology, prototype and technology transfer leading to new innovation and product.

- Scheme for Translational and Advanced Research on Science (STARS)
- A2K+ Proposal on Technologies

## Scientific Program Portfolio with IUSSTF

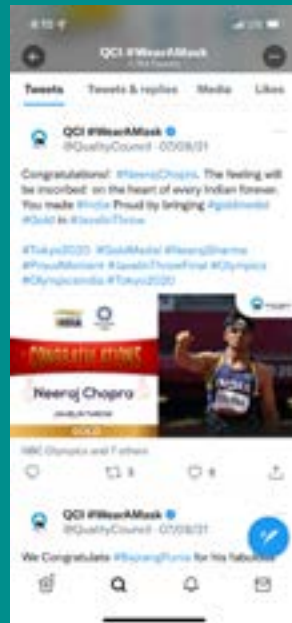
The Indo-U.S. Science and Technology Forum (IUSSTF), a bilateral, autonomous organization, was established by the Governments of India and the United States of America in 2000. IUSSTF acts as a catalyst to promote long-term scientific collaborations between India and the U.S. through partnerships amongst individual scientists, scientific institutions and the scientific community at large.

IUSSTF and RACB are under intense dialogue since last few months to discuss the scope of work broadly on the analysis of program portfolio of IUSSTF in the streams like core, endowment and extramural. A series of meetings has been organized and relevant inception documents have been shared to finalize possible collaboration between IUSSTF and QCI.





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# NABL Updates

July-September 2021

## July 2021

### Participation in Industry Education Program for Agri Food Products Sector

NABL participated in the “Industry Education Program for Agri Food Products Sector” conducted on 20th July 2021.

Ms. Anita Rani, Joint Director and Mr. Nikhil Kumar, Assistant Director, NABL gave presentation on "Key Announcements by NABL for Agri & Food Testing Laboratories. Launch of PARAKH Portal for Accredited & Recognised Labs for industry & public use.



### Interaction Programme with New Assessors on 23rd July 2021

NABL conducted an interaction program with new assessors and NABL officers to harmonize and strengthen the accreditation process.

In the interactive session, the assessment practices were discussed to ensure uniformity.



nabl-india.org



National Accreditation Board for Testing and Calibration Laboratories

@QualityCouncilofIndia @QualityCouncil qualitycouncilofindia quality-council-of-india-qci-



## NABL-IGS Awareness Program on Accreditation Requirements of ISO/IEC 17025 in Geotechnical Testing on 31st July 2021

NABL, in association with Indian Geotechnical Society (IGS), organized a webinar for the members of IGS Tamil Nadu chapters on "Awareness on NABL Accreditation" on 31st July 2021.

Participation was from PWD, NHAI, Geotechnical laboratories and corporate sectors. Around 70 participants from different cities of Tamil Nadu attended the program through virtual platform. The webinar was inaugurated by Prof N K Samadhia, President IGS & Professor IIT Roorkee.

The awareness program provides a common forum for laboratories, construction engineers and important government departments interested in geotechnical activity to discuss accreditation requirements, technical aspects in testing of soil, rock & construction material samples as well as testing & calibration requirements in Geophysical Investigations, rock mechanics tests, foundation construction & testing for power, transportation (Highway / Railway), building and industrial sectors.

Mr N Venkateswaran, CEO NABL called upon the geotechnical testing laboratories to enhance testing capability and cover all required scope for complete testing of soil and rock. Experts from IGS like Prof Shiva Kumar Babu, Professor IISc, Bengaluru emphasized upon the importance of reliable geotechnical testing for public safety and prevention of mishaps.

Mr. Pankaj Johri, Joint Director, NABL explained about accreditation and its advantages.

Mr Ranjith Kumar, Assistant Director gave presentation about the accreditation process..



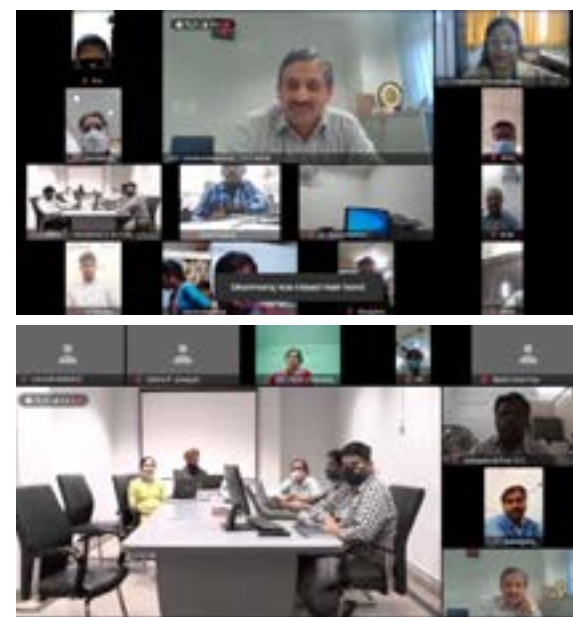
## August 2021

### NABL M(EL)T Awareness Programs on 3rd Aug 2021

NABL conducted Medical (Entry Level) Testing {M(EL)T} Program on 3rd Aug 2021 (2 Sessions).

More than 180 participants belonging to laboratories were sensitized about the benefits of the M(EL)T program which is based on PT participation.

An example of live filling of the application by laboratories was presented using mobile application and the dedicated web portal.



### NABL M(EL)T Awareness Program on 8th Aug 2021

NABL conducted Medical (Entry Level) Testing {M (EL) T} Program along with paramedical association on 8 Aug 2021.

More than 60 participants belonging to laboratories registered with paramedical association were sensitized about the benefits of the M (EL) T program, which is based on PT participation.

An example of live filling of the application by laboratories was presented using mobile application and the dedicated web portal.



### NABL M(EL)T Awareness Program on 19th Aug 2021

NABL conducted Medical (Entry Level) Testing {M(EL)T} Program along with NACO – Delhi State AIDS Control Society on 19 Aug 2021.

More than 25 participants belonging to PPTCT, ICTC, laboratories registered with NACO – Delhi State AIDS Control society were sensitized about the benefits of the M(EL)T program which is based on PT participation.

An example of live filling of the application by laboratories was presented using mobile application and the dedicated web portal.



### Assessor Training Programme 18th to 20th Aug 2021

NABL Assessor Training Course on ISO/IEC 17025: 2017 conducted at Gurugram during 18th to 20th August 2021.

20 Participants attended the program.



### NABL awareness program for MSMEs of Karnataka with NSSHO, Bengaluru on 24th Aug 2021.



NABL conducted awareness program on 24.08.2021 for SC ST MSMEs in Karnataka region along with National SC ST Hub Office, Bengaluru. Representatives from around 40 MSME units participated in the program.

The MSME units were sensitized about the benefits of testing in NABL accredited laboratories. NSSHO informed them about the benefits of testing fee reimbursement for products tested in NABL accredited laboratories. The MSME units expressed their intent to test farm equipment for which NABL accredited laboratories are requested to support.

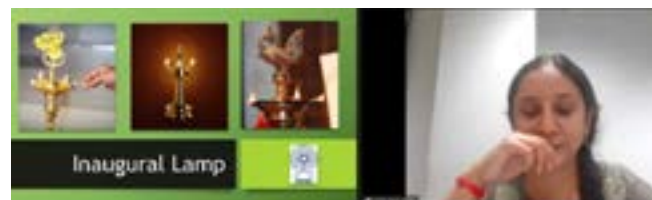
### NABL 5th PTP/RMP Conclave





The 5th Proficiency Testing Provider / Reference Material Producer (PTP / RMP) conclave was conducted on 30th and 31st August 2021 virtually through video conferencing mode. More than 300 participants attended the conclave including international attendees from China, Iran, Mexico, Sri Lanka, etc.

Mr. N Venkateswaran, CEO, NABL welcomed all the participants and explained that due to the current situation, the program was planned in virtual mode.



Ms. Anita Rani, Joint Director, NABL and coordinator – PTP / RMP Program welcomed all the participants, evaluation panel members and international guests. The conclave was opened with a virtual inaugural lamp.

The PTP / RMP team members of NABL were introduced.



Ms. Anita Rani gave presentation on the updates w.r.t PTP / RMP accreditation program of NABL in brief.



Special address of the conclave was given by Prof. HE Ping, Senior Manager, CNAS, APAC PTC Chair. Prof. HE Ping explained the international scenarios for PTPs and RMPs. He informed about the current progress on revision of ISO/IEC 17043 'Conformity assessment — General requirements for proficiency testing' standard. The upcoming prospects for PTP / RMP were explained along with the COMAR database and various

information available for RMP. He praised NABL for updating APAC list of accredited PTPs regularly and actively thereby benefitting NABL accredited PTPs to avail global business opportunities. Further, the contributions from NABL in ISO/CACO/WG57 which is currently revising the ISO/IEC 17043 standard were appreciated.



Ms. Mallika Gope, Director, NABL briefed about the program and the competition between the PTP / RMP for presentation of their PT Schemes and RM production experiences. She introduced the panellists and explained the evaluation criteria being followed to choose the winners.



## Competition Session 1 Day 1

This Competition session was conducted for four NABL accredited Reference Material Producers (RMPs) on the approach followed by different RMPs about their material production. The session consisted of 15-minute presentation by the respective RMP followed by Q&A session and discussion.

The first presentation was given by Mr. Abhishek Agnihotri, National Council for Cement & Building Materials (NCCBM), Ballabgarh on the Certified Reference Materials: Aiming Excellency through testing and calibration. He explained the

production process, production planning and control, labelling and distribution of the CRM with the case study – Development of Composite cement (BND 5006) on physical parameters such as Blaine fineness.

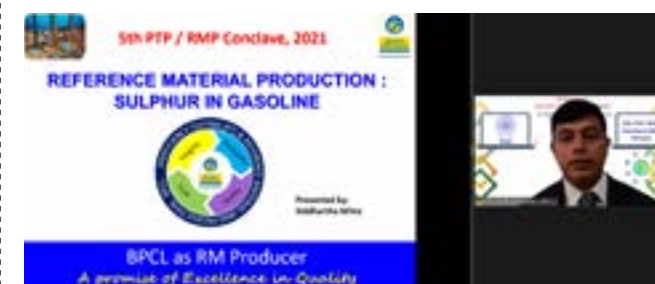


The next presentation was given by Dr. Alok Lehri, CSIR - National Botanical Research Institute, Lucknow on preparation of Certified Reference Material (CRM) Geraniol (aromatic phytomolecule). He elaborated on the aroma industry market size in India and the three aromatic CRM prepared (Geraniol, Limonene, Eugenol). The case study of preparation of geraniol was taken up which is prepared from palmarosa oil (aromatic oil). The care taken from procurement and the strict controls used in production planning and control were explained. The challenges faced and how they were overcome in the production of CRM w.r.t purity and other situations were elaborated.



## Competition Session 1 Day 1

The next presentation was given by Mr. Siddhartha Mitra, BPCL RMP, Mumbai on the Certified Reference Material - sulphur in gasoline. He explained the importance of the CRM in ensuring the adherence to the BS VI emission norms. As the nation leapfrogged to BS VI from BS IV, the major challenges faced in procurement of sulphur standards and how BPCL could gear up and within short time generate this much needed CRM were explained. The unique approach by BPCL and the challenges faced and overcome in ensuring the purity, characterization and safe handling, CRM / RM production process, assessment of homogenization and ensuring stability (short and long term), assignment of property value and certification as CRM were explained.



The next presentation was given by Ms. Pratima Kerekar, Metal Power Analyticals (I) Pvt. Ltd, Mumbai on the CRM – Low alloy steel. She explained the uniqueness of the solid metal CRM and its long-life stability, along with the CRM planning, production process flow and the new project plans. The key aspects w.r.t ensuring the homogeneity of the material right from the foundry to the production of CRM were presented. Three unique case studies of the challenges faced and their resolutions were elaborated.



## Technical Session 1 Day 1

The technical session was conducted by Mr. N Venkateswaran, CEO, NABL wherein the various PTP / RMP – Business aspects / opportunities were explained with the need for more PTPs / RMPs in upcoming areas of accreditation. The current available PTPs / RMPs and the call for scope expansion was given by CEO, NABL and was appreciated by all the participants.



## Competition Session 2 Day 1

This Competition session was conducted for three NABL accredited Proficiency Testing Providers (PTPs) on the approach followed by different PTPs about their Proficiency Testing Schemes. The session consisted of 15-minute presentation by the respective PTP followed by Q&A session and discussion.





This session started with presentation from Ms. Amruta Joshi, Horizon analytical laboratory Pvt. Ltd. (HALPL), Pune. The presentation was on PT Scheme – Sampling scheme for ambient Noise Level (Qualitative / Process of Sampling). She explained the uniqueness of this PT scheme for sampling followed by subsequent testing activity. The importance of noise measurement and the criticality which sampling plays in the measurement / quantifying noise were explained. The case study of the qualitative scheme along with planning of the PT schedule (Monitoring, evidences, PT activity) and performance evaluation were explained. The challenges faced in determination of potential sources of error were explained.



## Competition Session 2 Day 1

The next presentation was given by Mr. K K Karmakar, PT Coordinator, Deep Metallurgical Services, Thane on the PT scheme – Determination of an Effective Case Depth (ECD) at @550HV1 and Total Case Depth (TCD) by microscopic method. The PT program on measuring of carburizing case depth of steel which was conducted in October 2020 was taken as case study. He explained that ECD is the depth up to a point at which a specified level of hardness is maintained and TCD is the depth to a point where there is no difference in the chemical / physical properties.

The importance of competent measurements in these parameters as the gears and rollers require high hardness and wear resistance at surface and high toughness of core to withstand various stresses. The PT planning, preparation of the PT material, ensuring homogeneity and stability, packaging and dispatch of the PT sample, data management and evaluation / analysis of the results from the participants were explained.



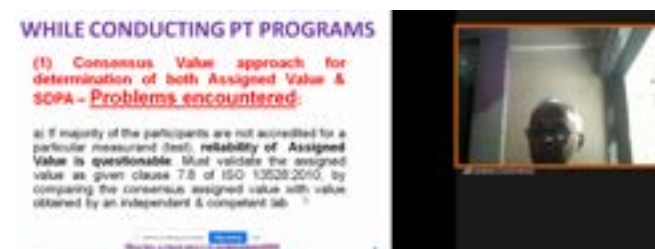
The next presentation was given by Mr. Kishore Prabhu, Fine Finish Organics Pvt. Ltd, Navi Mumbai on the PT scheme –

Tensile strength and percentage elongation of rubber by using EPDM rubber. He explained he benefits of participation in accredited PT programs to laboratories and salient features of the PT programme for tensile strength and % elongation of rubber. The design of the PT scheme, homogeneity and stability of the EPDM rubber PT sample, assigning value to the PT item and adjudging the trueness of this assigned value were explained.



## Experience Sharing

Mr. S Subramanian, Assessor, NABL shared his experiences as Lead assessor and technical assessor of NABL. He explained the requirements of the international standard and considerations for PTPs / RMPs in using risk analysis when developing the programs.



## Technical Session 2 Day 2

Ms. Anita Rani, Joint Director, NABL, Coordinator – PTP/RMP program welcomed the participants.

The session started with presentation from Dr. R S Saini, Assessor, NABL explaining about Proficiency Testing (PT) – A multipurpose tool to improve confidence of laboratories in generation of valid results.

He explained about the survey conducted to understand the potential for PT as an essential tool for quality / mandatory requirement for accreditation. Further, the experience of common mistakes in not following the instructions of the PT provider for conducting the testing on the PT sample were explained and the measures which can be taken to ensure adequate information is provided to participants in audio / video

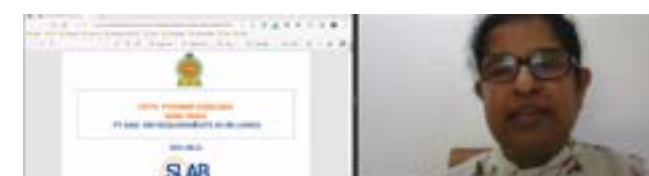
format to eliminate such errors. The need for limiting / clarifying the test methods to be followed for testing the PT sample were explained along with instructions for safe handling of PT items.



## Technical Session 2 Day 2

The program was graced by Ms. Chandrika Thilakaratne, Director / CEO, Sri Lanka Accreditation Board (SLAB), Sri Lanka. Ms. Chandrika praised Mr. N Venkateswaran, CEO, NABL for the unique initiatives for bringing together PTPs / RMPs and promoting accreditation. She thanked for the support provided by NABL to SLAB in starting the PTP / RMP accreditation schemes at SLAB and urged NABL to continue the unique initiatives to highlight the importance of accreditation in international trade.

Ms. Chandrika presented on the PT and RM requirements in Sri Lanka and urged NABL accredited PTPs and RMPs to take these up as business opportunities and provide their services globally. These international opportunities to NABL accredited PTP / RMP are due to NABL being an ILAC MRA signatory for Proficiency testing providers (PTPs) since 2019 and Reference Material Producers (RMPs) since 2020.



The program was also graced by Dr. Ravishankar C. N., Director, ICAR – CIFT, Kochi who applauded NABL for conducting such an informative program.

He presented on the expectations and requirements for PTP/ RMP by ICAR. He elaborated on ICAR and its network of institutes, NARS network, the testing domain and accreditation challenges being faced. He presented the requirements in PT schemes and CRMs and urged the accredited PTP / RMP to enhance their scope of accreditation.



## Technical Session 2 Day 2

Dr. Harinder Oberoi, Advisor – QA, FSSAI explained the expectation from FSSAI on the sectors in food which

require more number of PTPs and RMPs urging the accredited PTPs and RMPs to develop their schemes / CRM materials according to these requirements.

Ms. Pravatanalini Samal, Director, BEE explained the significance of Proficiency testing in implementation of the Standards & Labelling (S&L) Scheme of BEE and urged PTPs to develop schemes based on the products which are made mandatory in the S&L scheme.

## Competition Session 2 Day 2







This Competition session was conducted for four NABL accredited Proficiency Testing Providers (PTPs) on the approach followed by different PTPs about their Proficiency Testing Schemes. The session consisted of 15-minute presentation by the respective PTP followed by Q&A session and discussion.

The session started with the presentation from Dr. Pamela Christudoss, Christian Medical College (CMC) EQAS, Vellore on the PT scheme – chemistry program in medical lab. She explained the volume of work handled by CMC, Vellore and its services being as old as 51 years and the first medical PTP to be accredited. The EQAS – Bovine serum preparation was

explained which was replaced by human serum in 2010. The PT sample preparation of dialysis, clot, centrifuge, prelyo check, spiking, capping, lyophilizer, vial sealing, labelling and careful packaging with three layers were explained. The EQAS program has participation from ten thousand of participants (as of 2021) and the PT plan explained emphasised on salient features of the program including assigning the value to PT items, evaluation of participant results, dealing with outliers. The problems being faced over a period of two decades were noted with the resolutions adopting the upcoming technologies.

The next presentation was given by Dr. Nidhi R, Neu-QAP,

Bengaluru on the PT scheme – Cytogenetics plan. She emphasised that the NeuQAP is the first PT provider for PT in cytogenetics EQA programme. In addition, EQAS in other disciplines of medical testing is also provided. She explained in detail about the design of the PT scheme wherein the selection of the PT material and the pre-analytical, analytical and post-analytical cycles are being done along with Unbended / Unstained slides prepared from 72 hr PHA and three cases of spotters and three cases of karyotype from peripheral blood. The result entry by participants and the evaluation of performance (Post analytical) using consensus with ISCN 2016 guidelines were explained.



Competition Session 2 Day 2

The next presentation was from Ms. Pushpa Sharma, EFRAC, Kolkata on the PT scheme – Determination of antibiotics in fish. She explained about the benefits of Proficiency testing and the PT design with antibiotics in fish for eight analytes. The selection of the fish sample and preparation of the sample were explained along with the details on the spiking of the sample to ensure homogeneity. The stability studies for the long and short term of the samples were explained. The method of assigning value of PT items were explained along with the method of evaluating participant's results.



The next presentation was by Ms. Anuprita Joshi, Envirocare Labs Pvt. Ltd., Thane on PT Scheme – Salmonella Spp, E.Coli and Listeria monocytogenes in Milk. She explained about the PT Design, participation criteria, sample preparation and distribution along with statistical analysis. The homogeneity and stability studies along with the assigned values were explained.



Panel Discussion

The panel discussions involved three case studies and discussion on the individual circumstances. The first case study was on selection and evaluation of outsourced activity, second was on assignment of property value, third case study was on RM producers / distributors.



Conclave closing

Based on the predefined criteria the presentations from 7 PTPs and 4 RMPs were evaluated by the panellists. All the presentations scored well with marginal differences in the final score.

Mr. N Venkateswaran, CEO, NABL presented token of thanks to the panellists for providing their support and grading the various Aspects of Presentations from PTPs / RMPs.

The winners were announced and presented with trophies as follows:





### First Prize winner

Neu-QAP, Bengaluru



### Second Prize winner

EFRAC, Kolkata



### Third Prize winner

BPCL RMP, Sewree



Also, all the presenters in the conclave were congratulated and presented with a memento.

## 5th Tripartite Meeting of Technical / Quality Infrastructure institutions of IBSA Countries on 25th and 26th Aug 2021

The IBSA Dialogue Forum is an international tripartite grouping for promoting cooperation among India, Brazil and South Africa.

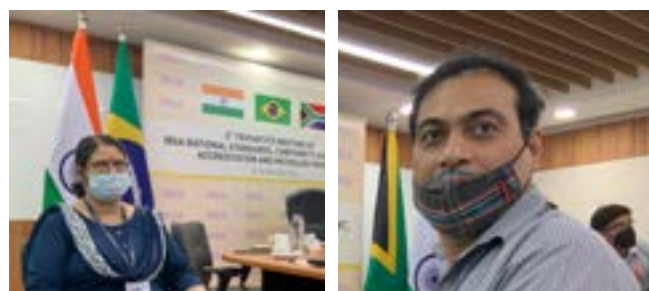
The Governments of IBSA countries had signed an MoU in 2008, on trade facilitation for standards, technical regulations and conformity assessment.

5th Tripartite Meeting of national organizations of standards, technical regulations (including metrology), and conformity assessment (including accreditation and metrology) of IBSA countries i.e., India, Brazil and the South Africa was held on 25 and 26 August 2021 at Sushma Swaraj Bhawan, Chanakyapuri, New Delhi.

The meeting was attended by delegates of BIS, NABL, NABCB and NPL with MEA moderating the event.

Mr N Venkateswaran, CEO NABL, Ms Mallika Gope, Director & Mr Pankaj Johri, Ms Anuja Anand and Ms Anita Rani, Joint Directors attended the meeting.

Mr N Venkateswaran, CEO talked about the role of NABL and the scale of accreditation operations of NABL and discussed the future possibilities of cooperation with IBSA countries.



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.**

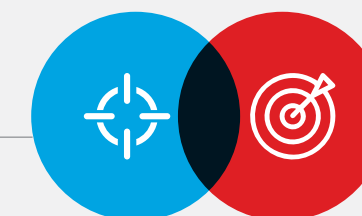
NABH has been established with the objective of enhancing health system & promoting continuous quality improvement and patient safety. The board while being supported by all stakeholders, including industry, consumers, government, has full functional autonomy in its operation.

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

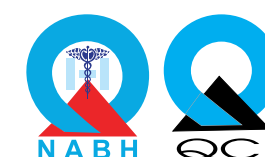
### Training & Education

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**

5<sup>th</sup> 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







# NABH Updates

July-September 2021

Achievements in the last three months (July 2021 to September 2021)

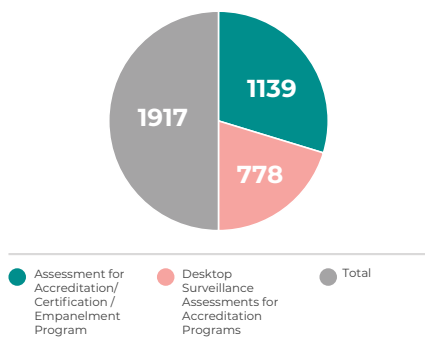
## VIRTUAL ASSESSMENTS CONDUCTED

NABH team has initiated remote and hybrid assessments of HCOs using virtual platforms. To start with, virtual assessments of HCOs were conducted on pilot basis and the outcome was found to be favourable. It is expected that this will reduce the pendency in accreditation or certification cycle tremendously.

Total number of assessment 1917 conducted for Accreditation, Certification and Empanelment during July 2021 to Sep 2021.

S.No.	Program	Assessment Conducted
1.	Assessment for Accreditation/ Certification / Empanelment Program	1139
2.	Desktop Surveillance Assessments for Accreditation Programs	778
Total		1917

Assessment Conducted from July 2021 to September 2021



National Accreditation Board for Hospitals and Healthcare Providers

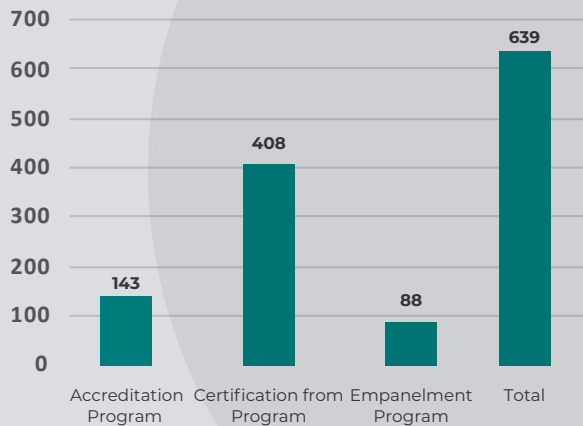
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ACCREDITATION/CERTIFICATION/RECOMMENDATIONS FOR EMPANELMENT GRANTED

S.No.	Program	Accreditation/ Certification Granted
1.	Accreditation Program	143
2.	Certification Program	408
3.	Empanelment Program	88
	<b>Total</b>	<b>639</b>

Accreditation, Certification & Empanelment Status from July 2021 to September 2021



QUALITY CONNECT-LEARNING WITH NABH

NABH announced the enriched continuation of "NABH Quality Connect-Learning with NABH" initiative under which free monthly training classes, webinars and seminars will be conducted. The training topics will cover all aspects of patient safety, including: Key Performance Indicators, Hospital Infection Control, Management of Medication, Document Control etc.

NABH Training Programs on Implementation (POI) & Educational Workshops on Virtual Platform:

- Programs on implementation are conducted 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 POI is to provide guidance to healthcare provider on implementation of NABH standards. These program are instrumental in developing internal Capability within the hospitals to work towards implementation of quality and patient safety standards, achieving accreditation and maintaining the same.
- During the period from July 2021 to September 2021, 26 educational workshops were conducted on virtual mode wherein more than 1040 healthcare professionals participated.





## CELEBRATION OF PATIENT SAFETY DAY ON 17TH SEPTEMBER, 2021

NABH celebrated World Patient Safety Day on 17th September, 2021 through the release of a media collage of the stakeholders



## NABH PARTICIPATED IN FIT INDIA CAMPAIGN

In order to commemorate “#AzadiKaAmritMahotsav on one of the pillars of the celebrations for Resolve@75, from 13th August, 2021 to 2nd October, 2021, NABH staff participated in ‘Fit India Freedom Run 2.0’.

## REVISION OF ACCREDITATION/ CERTIFICATION STANDARDS

NABH is in the process of revision of accreditation and certification standards.

### Draft Standards with Technical Committee for final review:

- Small Healthcare Organisation Accreditation Program CO
- Entry Level Certification Program

### Draft Standards with Expert Committees for final revision:

- Blood Banks Accreditation Program
- Allopathic Clinics Accreditation Program
- Dental Accreditation Program
- Nursing Excellence Certification Program
- Medical Laboratory Certification Program

## OTHER ACTIVITIES



Independence Day Celebration by Team NABH



Virtual POI Training on 5th Edition



6th Virtual Quality Conclave with NBQP on 22nd March 2021



Entry Level Certification Awarded to Safdarjung Hospital, Delhi



ELETs Hospital Infrastructure Summit

## NABH NEWSLETTER

NABH released the 3rd issue of its Newsletter, Quality Connect, with the theme “Sharing Best Practices in Patient Safety” on the occasion of World Patient Safety Day on 17th September, 2021. Soft copy is available at NABH Website under resource section.





## NITI Project- NABH

NITI Aayog launched the report 'Best Practices in the Performance of District Hospitals' in the presence of CEO, NITI Aayog, Member Dr. VK Paul, Addl Secretary Dr. Rakesh Sarwal, Addl Secretary, Ministry of Health and Family Welfare, QCI Chairman Adil Zainulbhai and key officials from WHO, India. The report was prepared by NITI Aayog in collaboration with Ministry of Health and Family Welfare, QCI-NABH and WHO.

This is the first-ever pan-India assessment at the district level that draws upon physical validation of the data from the Health Management Information System (HMIS) to benchmark the district hospitals on a diverse mix of input and output indicators ranging from beds, doctors, nurses, paramedics, diagnostic and health care facilities to the rate of Caesarean section surgeries and bed occupancy, amongst others. The data collection and validation exercise for the report was conducted by NABH, QCI involving onsite review of medical records of all district hospitals.



## Significance of Quality in Clinical Research in India

Clinical Research in India is seeing a resurgence. India is a preferred destination for global pharmaceuticals as this country has a therapy naïve population and also trained manpower. The geographical distribution in India also makes it a fair ground to make an effort and try out the newer interventions in drugs and devices.

The recent changes in regulations have made India one of the more stringent countries and the data collected from Indian sites add to the overall value of clinical study reports. NABH along with Quality Council of India took it upon itself to go ahead with Professor Roy Choudhury's dream of Ethics Committee Accreditation in the country.

NABH trained the Assessors and made them understand the 10 standards and 49 elements towards making the Ethics Committee an independent body with its members having the requisite knowledge and understanding about their roles and responsibility as Ethics Committee members. It was made clear that Ethics Committee is the local regulator in ensuring that the trials are robust in their conduct. The members got their trainings and certification on the latest New Drugs & Clinical Trial (NDCT) rules and regulations. It also emphasized on having multi sectoral composition with scientifically valid objective ways to look into the risk and benefit, ethics, informed consent document and process.

With a third-party peer oversight on the ethics committees through the NABH Accreditation, there was definitely an increased awareness among the trial sites, the investigators and the Ethics committees. They worked towards

making the processes more regulatorily aligned, improved the documentation of the activities, and worked towards a better close out, archival and retrieval policies.

The mandatory registration of the Ethics Committees with the CDSCO since the year 2013 had brought in some accountability. The sponsors made it compulsory and aided in the process. That was perhaps the first step towards quality building in the Clinical Trial Process. Down the line, the re-registration process required few added lists of documents. Ethics Committees started doing and maintaining all process related files and documentation.

With the advent of accreditation, there was a site visit, an audit of the protocol related documents, an interview with the EC members and a facility tour. Never had an Indian Ethics Committee go through this prior except for a handful which had any global Accreditation before.

Quality was the main focus, keeping the patient safety and wellbeing as the center around which Ethics evolved. Patient was the most important stakeholder and that was clearly focused in all the actions. The importance of approving all trial related essential documents in a full board meeting, capturing the minutes of the meeting with complete attendance of the members was a must. The narration had to meet the regulatory requirements and any conflict of interest had to be documented.

Clinical research saw a new dawn again starting end of 2016/2017. The global community again started reaching out to India. After the dim seen between

2011-2013, the regulators had defined their stake, the Ethics Committees were enabled. The investigators felt more comfortable in reaching out to their patients and telling them about ongoing research. The numbers increased steadily in the Clinical Trial Registry India (CTRI) and today, we are a proud nation to have done the COVID vaccine research and rolling out an indigenous vaccine from homeland which has completed its clinical trials and got an emergency use approval from the regulators. It is not only being used in India but is also being exported to many countries in this hour of need.

While we progress on our clinical research and publications, do trials in India on the many new Investigational products, changed formulations or newer better devices, our goal should be fixed on the 3 principles of 'autonomy, beneficence and justice'. At no point should we break away from this guiding principle and let the human participants bear the after effects. Research is and always for the participants of today. At no point in time can science take an upper lead while participants' right to privacy, safety, wellbeing dignity, privacy or confidentiality be at stake. Working towards a better clinical research environment is and always will be our common goal.

### Benefits and Significance of Accreditation:

1. Demonstrates accountability to the public
2. Demonstrates the commitment to excellence
3. Strengthens consumer confidence





QUALITY COUNCIL OF INDIA

4. Facilitates continuous quality improvement

5. Improves staff morale

6. Facilitates information sharing

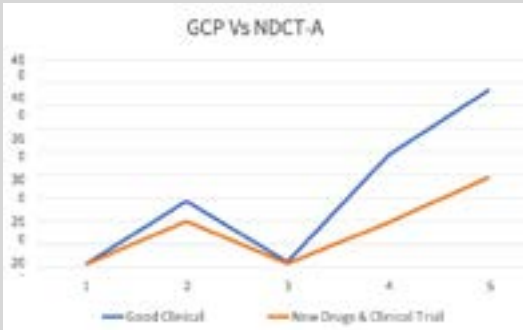
7. Priority in getting financial assistance
8. Helps the Institution to know its strengths, weaknesses and opportunities

9. Gives the accredited facility a new sense of direction and identity

10. Promotes intra and inter-institutional interactions
- For Awareness and for the interest of keeping all the stakeholders, NABH is continuously conducting trainings on Good Clinical Practice (GCP) and New Drugs and Clinical Trial Rules (NDCT) as it is the need of hour and has been made compulsory by CDSCO for all the research staff involved in regulated Clinical Trials.

A SUMMARY OF TRAININGS CONDUCTED BY NABH ARE AS FOLLOWS:

S No.	Name of Training	No. of Trainings in year 2020	No. of Participants attended & availed the Certificate	No. of Trainings in year 2021	No. of Participants attended & availed the Certificate	Total no. of participants trained in 2020 & 2021 (Virtually)
1	Good Clinical Practice (GCP)	5	142	10	242	384
2	New Drugs & Clinical Trial Rules (NDCT)	5	99	7	96	195



WAY FORWARD TO IMPROVE THE SAFETY OF THE PROCESS OF CLINICAL TRIALS IN INDIA

We appreciate the steps taken by the Government of India to establish confidence in India's research capabilities and bring transparency in every step followed in the process of clinical trials without the harm to the subjects. This will also promote and improve the standard for Clinical Trial practices in India which will ultimately

lead to increased number of clinical trials (Sponsored/ Investigator's initiated) in India.

In order to bring Clinical Trial procedure and policies on par with global standard and to ensure wellbeing/protection of trial participant, NABH requests Government of India to continue this accreditation

process and to consider the accreditation program for Investigators and trial site.

In order to bring more accountability and transparency in Clinical Trial Procedure in India, NABH suggests to make accreditation a compulsory step for re-registration for all the Ethics Committees which are registered by the CDSCO.

Compiled by Prashant Paschal  
Assistant Director, NABH, QCI



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



Students and Working Professionals

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



## NABET Updates

July-September 2021

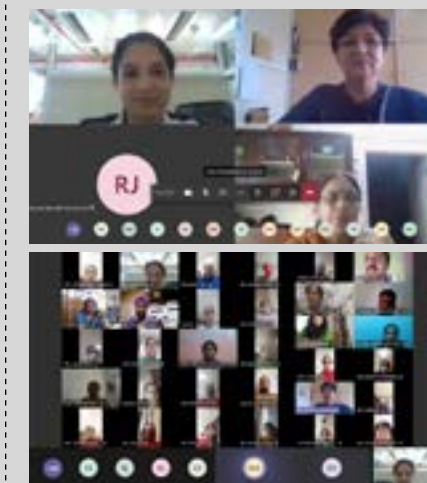
### Formal Education Excellence Division (FEED)

The details of various activities and projects conducted by FEED-NABET:

### Assessment and Evaluation Projects

#### ASSESSMENT & ACCREDITATION OF SCHOOLS UNDER ARMY WELFARE EDUCATION SOCIETY (AWES)

FEED has received a work order from AWES for accreditation of 10 schools as pilot. The objective is to provide framework for the effective management and delivery of the holistic education program aimed at overall development of school. As per project phases development & capacity building and Phase I has been successfully completed which includes online awareness workshops for school stakeholders (Principals, Teachers, Process owners, etc.), application & document review and handholding.



Online Awareness Workshops for AWES stakeholders

#### ACCREDITATION OF 72 DAV SCHOOLS, CHHATTISGARH

After successful completion of readiness virtual assessments of 72 schools

on NABET Accreditation Standard, handholding of schools has been initiated in the month of July 2021. FEED-NABET has developed a structured, user friendly and scalable model for assessing schools in virtual mode. Presently, a dedicated team of professionals are conducting school-wise handholding sessions to brief the schools on gap areas, expectations and timeline for closures.

#### ASSESSMENT & EVALUATION OF 1252 HOSTELS UNDER MISSION SUVIDYA, ST & SC-ODISHA

The Department of ST & SC Development, Minorities and Backward Classes Welfare Odisha is administrating around 4000 residential hostels currently. In an effort to understand the conditions existing in these hostels, standardize the processes and initiatives, and thereby further improve their basic services, the Government of Odisha has initiated Mission Suvidya to offer a conducive learning and hospital environment in these hostels. For successful implementation of project, FEED-NABET has developed a structured mechanism to conduct virtual assessment of hostels under ST & SC department. Further, the Desktop Assessment (DA) of 1252 hostels has been successfully conducted by NABET out of which 779 hostels have cleared the DA process & the Virtual Assessments have been completed in the month of June 2021. The final report of the project has been successfully submitted to the department in the month August 2021.

nabet.qci.org.in



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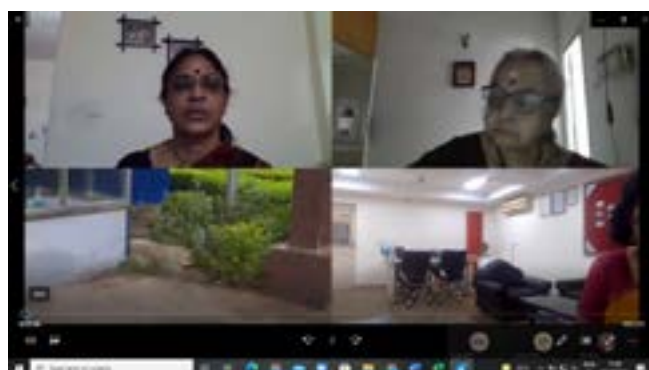
NBQP

ARTICLES



## VIRTUAL ASSESSMENT OF SCHOOLS ON NABET ACCREDITATION STANDARD

FEED-NABET has structured the process of evaluating schools in virtual mode for NABET Accredited Schools. In the month of July 2021, Virtual assessments of accredited schools have been initiated where till now 18+ schools have participated in the process.



Virtual Tour of School during assessment

## Virtual Assessors' Meet

FEED-NABET organized a virtual meet in the month of September 2021 for all the assessors implementing NABET Accreditation Standard across the country. The objective of the virtual meet are as follows:

Sensitizing assessors on structure and process of implementation of NABET Standard.

Standardising the report writing among assessors as per requirement of standard.

Discussion on challenges faced by assessors during implementation of NABET Standard in schools.



Formal address of Virtual Meet

Sensitize assessors on developed Do's & Don'ts guidelines & current developments with respect to recent COVID-19 impact.

In the event, 30+ assessors participated and provided their valuable inputs to bring standardization in the virtual assessment process.

## DIGITAL AWARENESS WORKSHOPS

Digital Awareness workshops on Statutory & Regulatory Requirements

FEED-NABET organized online Awareness workshop on Statutory & Regulatory Requirements to spread awareness about the required regulatory compliances, committee constitutions & its functioning.

The program was designed for: Principals, Teachers / School Administrators (Core team members), etc.

Following were the takeaways of the programme:

- Understanding meaning of Statutory & Regulatory compliances.

Regulatory Compliances/ Assessment Checklist	
S.No.	List of Documents
1	CBSE Admission letter
2	Correspondence with CBSE file
3	NOC from State Govt and Application file
4	Recognition under RTE file
5	License Deed / Sale Deed
6	Land Certificate
7	Building Safety Certificate
8	Letter of Allocation of land if allotted from some Govt. Body/Autonomous Body
9	C.E.U. (Conversion of Land Use), if applicable
10	Approved Building Plans

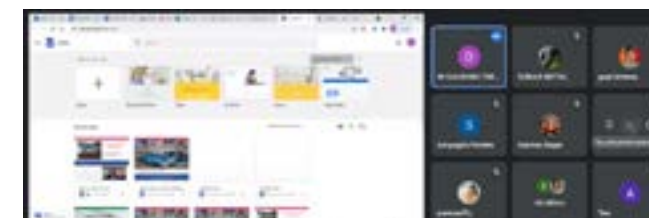
- Identifying list of documents/checklist to meet the compliances for CBSE/ICSE schools.
- Understanding documentation and other related aspects with respect to regulatory compliances for schools.
- Participants acquired skills on constitution & functioning of committees for Sexual Harassment, POCSO Act, etc.

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor NABET)
- Dr. Sunil Aggarwal

Digital Awareness Workshops in alignment with National Education Policy (NEP) -2020

## Preparing Schools for Online Assessment



## Preparing Schools for E-portfolios: Advanced ICT Solutions for Creating, Managing & Grading E-portfolios (Seesaw ICT Tools)



## Professional Development Programme for School Teachers



NABET-QCI conducted several workshops in alignment with NEP-2020 as per following details:

- Enhancing Blended and Online Teaching Capabilities through Hands-on Training
- Advanced ICT solutions for creating, managing & grading e-portfolios
- Professional Development programmes to understand portfolio assessment, rubrics development and employing rubrics for evaluation of portfolio assignments.

**The program was designed for:** Principals, teachers, examination coordinators, Educationists / Curriculum Developers and Education Consultants

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor NABET)
- Dr. Patanjali ( Vardhman Mahaveer Open University)
- Dr. Bhaskar ( IASE, Kumayun University)
- Dr. Upasana Ray RIE, Bhubaneswar
- Dr. Gaurang Tiwari (Accreditation officer, NABET)
- Adiba faiz (Accreditation officer, NABET)
- Arun Pandey (Junior Analyst)

## Environment Division

An online meeting on GIZ support for 3 tier post EC monitoring framework was organised by MoEFCC on 12th August 2021.







## 11th EIA Assessors' Meet 2021, Goa from August 31st to September 2nd, 2021

11th Assessors' Meet 2021 was held at Goa from August 31 to September 2, 2021. All empanelled Assessors, AC/TC Committee members associated with the "Scheme for accreditation of EIA consultant organizations" participated.



Dignitaries on the dais for inaugural session (from L to R)- Sh. A. K. Ghose, Chairman, EIA-AC; Sh. A. K. Jha, Sr. Director, QCI-NABET; Chief Guest - Sh. Anand Mohan Sharan, IAS, Principal Secretary to Govt. of Haryana; Dr. R. P. Singh, SG-QCI; Dr. Manish Kumar Jindal, CEO-NABET; Dr. K. S. Anandan, Member, EIA-TC.



Dignitaries on the dais for Valedictory Session (from L to R)- Sh. A. K. Ghose, Chairman, EIA-AC; Sh. A. K. Jha, Sr. Director, QCI-NABET; Sh. Santosh Kumar, IFS, Addl. PCCF & Chief Wildlife Warden, Govt. of Goa; Chief Guest - Sh. Alok, IAS, CEO & Secretary, (Election, Power, New & Renewable Energy, Environment), Govt. of Goa, Dr. Manish Kumar Jindal, CEO-NABET; Dr. K. S. Anandan, Member, EIA-TC.



## GWCO and APA & MPPA Assessors' Meet 2021, Goa from September 2nd to September 4th, 2021



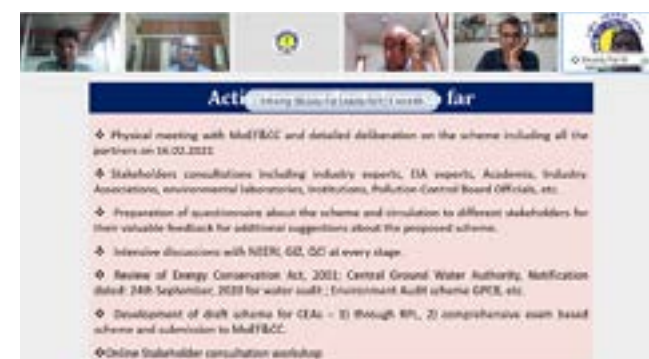
1st Assessors' Meet 2021 was held at Goa from September 2nd to September 04th, 2021. All empanelled Assessors, AC/TC Committee members associated with the following Schemes.

- Accreditation Scheme for Ground Water Consultant Organizations (GWCO)
- Accreditation Scheme for Prospecting/ Exploration Agency (APA) and Mining Plan Preparation Agency/ organization (MPPA)



Dignitaries on the dais for Valedictory Session (from L to R)- Sh. Sanjay Gihar, IAS, Secretary (Water Resources), Government of Goa- Chief Guest, Sh. B. B Dhar, Chairman-AC, APA& MPPA; Sh. A. K. Jha, Sr. Director, QCI-NABET; Dr. Manish Kumar Jindal, CEO-NABET; Dr. Dipankar Saha, Chairman-AC, GWCO.

## A Meeting on 3TMM- RPL Scheme was organised by NPC on 20th September 2021, through online mode



# MSME and Skill Training and Service Division

## Webinar

## Cyber Security for protecting Data and Critical Infrastructure in MSMEs and Govt establishments

**Date: 16th July 2021. Number of Participants: 39**

Organisations that embrace digital solutions for achieving Digital India mission, have greater resiliency in the face of adversity— and a leg up on the competition that will enable them to recover faster and facilitate a pivot from playing defence to chasing growth.

Digital India solutions foster efficiency advantage, productivity advantage, customer advantage in growth and monitoring besides agility advantage to leverage data driven insight to make decisions faster and act on them faster. However, the growth of digital transformation is leading to increased proliferation of cyber threats in the current environment. Cybersecurity issues are becoming a day-to-day struggle for businesses.

Recent trends, side effects of a global pandemic and cybersecurity statistics reveal a huge increase in hacked and breached data from sources that are increasingly common in the workplace, like mobile and IoT devices. On top of this, COVID-19 has ramped up remote workforces, making inroads for cyber-attacks.

Additionally, recent security research suggests most companies have unprotected data and poor cybersecurity practices in place, making them vulnerable to data loss. To successfully fight against malicious intent, it's imperative that companies make cybersecurity awareness, prevention and security best practices a part of their culture.

It becomes pertinent for organisations to secure their cyber space by taking adequate cyber security measures. Leading measures are

- Endpoint security (protect smart devices, smart phones, laptops)



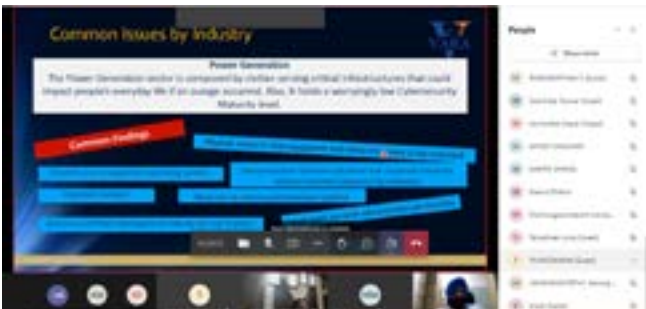


- Email security (Block spams, virus, phishing and personification)
- Web security (eliminate online threats)
- Virtual Firewall security (Safeguard business from sophisticated threats)
- Multi-factor authentication (verify your remote workers).

The webinar aimed to address the various threats and vulnerabilities in cyber space and take possible measures to prevent and mitigate them.

Topics

- "Secure Architecture for Industrial Control Systems"- Dr. Alok Tripathi, Director, National Institute of Electronics and IT (NIELIT) , Patna, Ministry of Electronics and IT (MEITY) , Govt. of India
- Operational Technology (OT) using Unidirectional Firewall - Col. Inderjeet Singh, Director General, Cyber Security Association of India (CSAI)



Webinar

Cyber Security Vulnerability Assessment and Penetration Testing (VAPT) towards Securing Critical Infrastructure in Govt. establishments and MSMEs

Date : 25th August 2021 . No. of Participants : 28

With increasing world-wide connectivity of information systems and growth in accessibility of data resources, the threat to Integrity and Confidentiality of Data and Services has also increased. Organisations are facing very significant challenges in securing their web applications from rising cyber threats, as compromise with the protection's issues don't seem to be reasonable.



Vulnerability Assessment and Penetration Technique (VAPT) techniques help them to identify the security loopholes. These security loopholes could be utilized by attackers to launch attacks on technical assets. Thus it is necessary to ascertain these vulnerabilities and install security patches. VAPT helps organisation to determine whether their security arrangements are working properly.

The Cyber Security awareness and its importance at various levels of an organisation for adoption of required up-to-date security measures by an organisation is absolutely pertinent today to stay protected from various cyber-attacks.

Webinar

12th Virtual Quality Conclave: "Improving Credibility of Learning Service Provider (LSP) through Accreditation"

Date: 6th August, attended by 219 participants

Quality Council of India (QCI) organized the 12th Virtual Quality Conclave (VQC) on "Improving Credibility of Learning Service Provider (LSP) through Accreditation" on 6th Aug 2021. This conclave was a joint venture of NBQP & NABET, the constituent boards of the Quality Council of India.

The primary objective of the conclave is to discuss about Improving Credibility of Learning Service Provider through Accreditation. National Education Policy (NEP) 2020 emphasizes on continuous lifelong training, education and skill development enabling each professional to remain relevant in employability



market. Training refers to an act of inculcating specific skills in a person. Education/ Training is the process of enhancing the skills, capabilities and knowledge of graduates for doing a particular job with quality. Education/ Training process moulds the thinking of employees and leads to quality performance of graduate trainees. It is continuous and never ending in nature.

Accreditation is a process of establishing the competence of Education/ Training Provider delivering the requisite elements of Education/ Training Provider and its ability to carry out an evaluation of competence acquired by the Learners.

Key Objectives of the Conclave:

- Improving quality of Learning Service Provider (LSP) through Accreditation
- Highlighting difference between Accredited and Non-Accredited Training Institute
- Enumerating improvement in credibility of an Institute through Accreditation

Benefits of Accreditation are as follows:

- Mark of Distinction between Accredited and Non – Accredited Courses
- Course Delivery Mechanism of Accredited Course Provider Verified
- Course Provider deployment of Competent Faculty for delivery of Courses
- Security and Confidentiality of Data being shared with Course Provider
- Employer Stakeholder professionals Prefers Accredited Course Provider Over Non-Accredited Course Provider







# NABCB Updates

July-September 2021

## NABCB secures International Equivalence for Greenhouse Gases (GHG) Accreditation Scheme and ICAO CORSIA

NABCB has secured international equivalence for its accreditation programme for Greenhouse Gas (GHG) Validation and Verification Bodies from Asia Pacific Accreditation Cooperation (APAC) in May 2021. NABCB has signed the

APAC Mutual Recognition Arrangement (MRA) for its GHG accreditation scheme, and subsequently the sub-scope for International Civil Aviation Organization (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) was also included for NABCB in June 2021. The GHG scheme is based on the international standard ISO 14065 “Greenhouse gases — Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition which specifies criteria for the operation of a greenhouse gas (GHG) validation and verification bodies”. NABCB has currently accredited four validation and verification bodies under GHG Scheme, out of which two bodies are accredited for ICAO CORSIA sub-scope.



## NABCB organized awareness programme on Sustainable Electronics Recycling International (SERI)

NABCB organized a sensitization webinar on Sustainable Electronics Recycling International (SERI) R2 Certification Scheme on 15 July 2021. SERI is a United States based non-profit organization with a purpose to protect the planet and enrich lives by championing sustainable actions with electronics all throughout their lifecycle. NABCB hosted the webinar for its stakeholders on the SERI scheme requirements. Mr. Rajesh Maheshwari CEO, NABCB welcomed the participants and



National Accreditation Board for Certification Bodies

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provided a brief overview of the SERI scheme in his opening remarks and set the context of webinar. Mr. Corey Dehmey - Executive Director, Ms. Patty McKenzie, Sean De Vries and Ms. Sharada Rao from SERI provided insights into the background and requirements of the SERI scheme. During the webinar the participants were informed on the SERI Scheme and its benefits, R2 Standard, and key factors driving certification and requirements for Certification Bodies. One of the R2 certified facilities also presented a case study and benefits of implementing the certification scheme.



## NABCB organized Webinars on “International Standards & Product Certification for PPE Products and Testing for PPE Products with international Norms”

NABCB along with British Standards Institution (BSI), the National Standards Body of the UK, organized a webinar on “Accreditation Capability on Product

Testing for the Certification of PPE Products for UK/EU and Global Market” on 28 June 2021. The webinar was organized under the UK-India ‘Ease of Doing Business’ Programme (EoDB), supported by the UKs Prosperity Fund, aiming to strengthen Indian Regulatory & QI institutions, and to facilitate better understanding on the international standards and conformity assessment of Personal Protective Equipment (PPEs), including the global best practices.

The inaugural session of the webinar was graced by Mr. Rajesh Maheshwari, CEO, NABCB; Avijit Das, Director, NABL;

Yashodhara Dasgupta, Senior Policy Adviser, UK Trade, Economics & Prosperity, British High Commission. During this webinar various presentations were delivered by the subject matter experts.

The vital objective of this meeting was the National

role in reducing barriers to trade, International Recognition, Interface with other accredited activities. There was discussion on the distinction between Testing and Certification, with a focus on PPE. Areas of relevance such as Risk and Opportunity, Contract Review, Conformity Decision Rules, Measurement Uncertainty, Scope of Directives, Categories of Risk, Competencies were also covered during the webinar.



## Awareness Webinars on NABCB Accreditation Schemes

NABCB with an objective to increase the awareness about the benefits of using NABCB accredited Conformity Assessment Bodies and to popularize its accreditation schemes is regularly conducting monthly webinars free of cost for the benefit of all stakeholders. NABCB has organized webinars on Inspection Bodies Accreditation Scheme every month from July to September 2021. NABCB received an overwhelming response and more than 500 participants attended, including from countries like Sri Lanka, Nepal, Vietnam, UAE, Bangladesh, Mauritius and Bhutan. The webinar covered details of NABCB accreditation and its benefits, NABCB accreditation process and key requirements of ISO/IEC 17020:2012 standard.

NABCB also organized a webinar on the Management Systems Accreditation Schemes (Quality, Environment, Occupational Health & Safety, and Energy) on 31 August 2021 for its diverse stakeholders, which includes Certification Bodies and Industry. This webinar provided a brief overview on the ISO/IEC 17021-1:2015 standard, applicable IAF Mandatory Documents,

Normative documents, Regulatory framework and NABCB accreditation process. The webinar was attended by 200+ participants.

NABCB intends to sensitize and create awareness with series of webinars on different accreditation schemes for industry, government organisations, regulators,



conformity assessment bodies, consumers and other stakeholders on accreditation and its benefits.

## NABCB participates in 5th Tripartite meeting of Technical / Quality Infrastructure Institutions of IBSA Countries

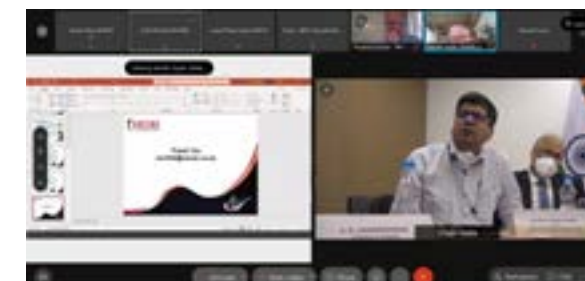
IBSA is a unique forum which brings together India, Brazil and South Africa, three large democracies and major economies from three different continents, facing similar challenges. All three countries are developing,

pluralistic, multi-cultural, multi-ethnic, multi-lingual and multi-religious nations. India is the current IBSA Chair. The IBSA Dialogue Forum aims to promote South-South cooperation and build consensus on issues of international importance. It also aims at increasing the trade opportunities among the three countries, as well as facilitates the trilateral exchange of information, technologies and skills to complement each other

strengths. It is a G2G MoU signed in 2008 between the Governments of IBSA member countries. The mandate of this Tripartite MoU

is on trade facilitation for standards, technical regulations and conformity assessment and cooperation in accreditation. The 5th tripartite meeting of Technical / Quality Infrastructure (QI) Institutions of IBSA member countries was held on 25 -26 August 2021 which comprised of National QI Institutions, which included BIS, NABCB & NABL from QCI, NPL, Dept. of Legal Metrology from India, and its counterpart bodies of Brazil and South Africa at New Delhi. The delegates of Brazilian and South African counterparts attended this meeting

virtually. The meeting was chaired by BIS with MEA moderating the event. Mr. Rajesh Maheshwari, CEO NABCB; Mr. Ajay Sharma, Jt. Director; Mr. Anand Deep Gupta, Dy. Director and Ms. Varsha Misra, Dy. Director attended the meeting. During the meeting, Mr. Rajesh Maheshwari, CEO-NABCB highlighted the role of NABCB and its accreditation programmes, its international recognition and provided insights on future possible cooperation amongst IBSA countries w.r.t accreditation and conformity assessment activities.







# NBQP Updates

July-September 2021

Open-House Online Training Program Title  
**2-DAY TRAINING SESSION ON  
PROCESS FAILURE MODE AND  
EFFECTS ANALYSIS (PFMEA)**

**Date: Jul 02 - 03, 2021**



## About the Topic

A Process Failure Mode Effects Analysis (PFMEA) is a structured analytical tool used by an organization, business unit or cross-functional team to identify and evaluate the potential failures of a process. PFMEA helps establish the impact of the failure and identify and prioritize the action items with the goal of alleviating risk. It is a living document that should be initiated prior to process of production and maintained through the lifecycle of the product.

This is one of the most powerful techniques to avoid process problems or to prevent defects in products and services

## Key Takeaways

- Why do failures happen and Why conduct FMEAs
- What are the REAL process failure modes
- Analyzing Risk beyond RPN calculation
- How to conduct a good analysis for prevention
- Effective implementation of the tool in practice
- To learn FMEA as a life-skill

Open-House Online Training Program Title  
**INTRODUCTION TO ARTIFICIAL  
INTELLIGENCE AND ITS  
APPLICATION IN BUSINESS”**

**Date – July 9-10, 2021**



## About the Topic

During the start of 2020, 4IR was pushing the SMEs for digital transformation. But after COVID-19, the digital transformation is no more a luxury but a necessity. In the new normal SMEs must adopt it or otherwise suffer. A major tech which can help business in making their processes lean is AI. This session discussed the concept in detail and will guide SMEs on the tool and techniques to implement the same.

## Objective & Key Takeaways:

- How SMEs can use AI and automation to run their operations smoothly
- To have a strong grasp of digital transformation that organisations are engaged in
- To have a strong grasp of concepts such as Artificial Intelligence, Machine Learning, Neural Networks, Supervised Learning, Classification, Prediction etc.
- To understand how managerial decision making and policy is impacted by AI technologies

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NABL

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NBQP

ARTICLES



Webinar Title

DEMAND DRIVEN OPERATING MODEL

Date – Jul 16th, 2021



About the Topic

V A Demand Driven Operating Model (DDOM) is a supply order generation, operational scheduling and execution model utilizing actual demand in combination with strategic decoupling and control points and stock, time and capacity buffers in order to create a predictable and agile system that promotes and protects the flow of relevant information and materials within the operational relevant range (hourly, daily and weekly). A DDOM’s key parameters are set through the Demand Driven Sales & Operations Planning (DDS&OP) process to meet the stated business and market objectives while minimizing working capital and expedite-related expenses

Key Takeaways

- Paces to Actual Demand
- Strategic Decoupling Points
- Strategic Control Points
- Dynamic Buffering

No. of Participants: 119

Open-House Online Training Program Title

LEAN CONCEPTS AND 4-STEP PROBLEM SOLVING APPROACH

Date – July 17th, 2021

About the Topic

How to maximize customer value while minimizing waste. In any Organization, it is important to identify problems, find out root causes and solutions to those problems. Participants came to know about the basic Lean concepts and 4 steps of problem-solving approach which will help them in identifying problems and its solutions in a methodical way.

Objective & Key Takeaways

- Lean Tools and Principals Like Fish bone, MUDA, 5S and Jidoka
- How to identify the problem
- How to identify the root causes to the problem
- How to identify the solution to the problem
- To implement the solutions and control the result

Open-House Online Training Program Title

INDIA’S ESG LANDSCAPE I BUSINESS RESPONSIBILITY & SUSTAINABILITY REPORTING (BRSR)

Date – Jul 19 – 20, 2021



About the Topic

An addition of the social and environmental to the traditional economic is increasingly being embraced by corporates to

holistically measure long-term sustainability through the Triple Bottom Line (TBL), the BRSR ushers in the game changing transition by Indian corporates to a sustainable economy through inclusive growth. This program offers a unique three-dimensional insight on the ESG from the regulator (SEBI), the industry, and a Sustainability practitioner’s perspectives.

The difficulties and challenges of the pandemic that the world has been encountering over the past year have clearly demonstrated the need for building resilience in our lives. Resilient businesses have not only survived the difficulties and done well; some have found innovative models to sustain and even excel during this period.

Key Takeaways

- Understanding Sustainability implementation & the global Environmental, Social and Governance
- (ESG) framework and interoperability with the BRSR

Open-House Online Training Program Title

ISO 22316: 2017 - ORGANIZATIONAL RESILIENCE

Date – July 29-30, 2021

About the Topic

Organizational resilience is the ability of the organization to absorb and adapt in a changing environment to enable it to deliver its objectives and to survive and prosper. A resilient organization can anticipate and respond to threats and opportunities arising from sudden or gradual changes in their internal and external context. Enhancing resilience can be a strategic organizational goal and is the outcome of good business practice and effective management of risks.

ISO 22316:2017 covered the fundamental concepts of organizational resilience and offered guidance on how to establish and maintain an organizational resilience management initiative. The program provided an understanding of organizational resilience, its principles and the mechanisms that support it, as covered in the standard.

Objective & Key Takeaways

- To identify the main components of resilience
- To increase the capacity to adapt and respond successfully to unforeseen events

- To improve the ability to reduce costs and increase efficiency through avoidance of pitfalls
- To gradually build an organizational culture of resilience

Open-House Online Training Program Title

BUILDING A CULTURE TOWARDS OPERATIONAL EXCELLENCE

Date – 05th Aug, 2021



About the Topic

Few MNCs, especially in IT & Auto sector, have attained success through continuous improvement and have always adapted themselves to the future. Focussing on problems will not make an organization adaptive, focussing on CULTURE towards improvement make the organizations adaptive. We can build or modify the culture we want habit-by-habit by practising in different ways. To change the culture, we need to change the behaviour and for a change in the behaviour, we need to change our routines.

The objective of this training program was to help the organizations change the Paradigm-mindset of their employees to move towards Operational Excellence and creative ideas.

Key Takeaways

- Meaning of Culture with examples
- Developing Organizational culture, Reason for excellence
- Approaches to improvements
- understanding the wastes -3 Mus
- Practising Continuous improvement culture
- Paradigms to change, Resistance to change
- Perquisites for change to occur
- Process of change with lots of examples from industries and exercises to understand the concepts of Lean





Webinar Title

CONCEPTS IN DESIGN OF SUPPLY CHAIN

Date – Aug 14th, 2021



About the Topic

Supply Chain Management should also evolve and transform. But how should we proceed? It is the nature of all powerful solutions to become the biggest hindrance to improvement as environment changes, so is the fate of SCM in its current form. It is based on the understanding of activities that a supply chain will need to perform so that it can meet the needs of the market. Should the technology or capability of doing this activity change, it is quite likely that it will impact the way supply chain has been operating.

Key Takeaways:

- To understand why supply chains are developed and then learn a concept that will help you design an improved supply chain.
- Supply Chain Management then becomes a practise and application.

No. of Participants : 170

Open-House Online Training Program Title

TL9000 ABRIDGED KNOWLEDGE PROGRAM

Date – August 19-20, 2021

About the Topic

TL9000 certification is a process standard and being used for certification of telecom service providers and Hardware, Software Suppliers to Telecom Service providers.

This certification is being used by telecom industry across the world for selecting vendors. Foundation for this standard is ISO 9000-2015. A company undergoing TL9000 certification receives both ISO9000 as well as TL9000 Certificate. Standard is unique and only one amongst all standards to have process compliance and specific measurements depending upon product. An organisation has to report data on the measurement each month to retain certification. The other benefit is also knowing benchmark data for same product across the world. It has also been made mandatory by public sector undertakings to select vendors.

This is highly rewarding for companies, employees as well as individuals supporting organisations in journey of excellence or Certification.

Objective & Key Takeaways

Telecom Supplier base shifting from China to India creating huge business opportunity to do business in India. DOT has also launched a scheme to attract suppliers & being TL9000 certified would open huge opportunity for business in India & across the world being TL 9000 certified. TL9000 certification ensures compliance to international practices and also helps to benchmark with other same product or service providers across the world.

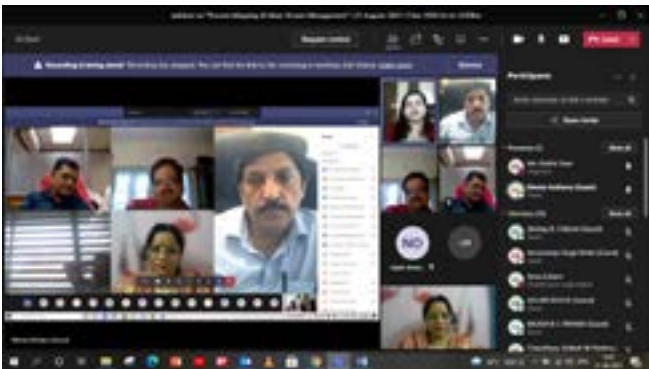
Webinar Title

PROCESS MAPPING & VALUE STREAM MANAGEMENT

Date – Aug 21st, 2021

About the Topic

Value Stream Mapping (VSM) is defined as a lean tool that employs a flowchart documenting every step in the process.



Many lean practitioners see VSM as a fundamental tool to identify waste, reduce process cycle times, and implement process improvement.

Key Takeaways

To provide a holistic overview explaining the whys, what's and how's of process mapping and value stream management to enable practical application in the respective domains of the audience along with

Knowledge of key terminologies like - Process, Process mapping, Value, Value stream, Value stream mapping, Value stream management

- Process & process mapping overview
- Value, Value stream mapping overview
- Key challenges, tips and tricks
- Benefits of practical application

No. of Participants: 140

Webinar Title

CYBER SECURITY | VULNERABILITY ASSESSMENT AND PENETRATION TESTING (VAPT) TOWARDS SECURING CRITICAL INFRASTRUCTURE IN GOVT. ESTABLISHMENTS AND MSMES

Date – Aug 25th, 2021

About the Topic

With increasing world-wide connectivity of information systems and growth in accessibility of data resources, the threat to Integrity and Confidentiality of Data and Services has also



increased. Organisations are facing very significant challenges in securing their web applications from rising cyber threats, as compromise with the protection issues don't seem to be reasonable.

Vulnerability Assessment and Penetration Technique (VAPT) techniques help them identify the security loopholes. These security loopholes could be utilized by attackers to launch attacks on technical assets. Thus, it is necessary to ascertain these vulnerabilities and install security patches. VAPT helps organisations determine whether their security arrangements are working properly.

The Cyber Security awareness and its importance at various levels of an organisation for adoption of required up-to-date security measures by an organisation is absolutely pertinent today to stay protected from various cyber-attacks.

In-house Online Training Program Title

ISO 14001 & ISO 45001 (ENVIRONMENTAL, HEALTH & SAFETY MANAGEMENT SYSTEMS) FOR NARORA ATOMIC POWER STATION (NAPS)

Date – Aug 26 - 27, 2021

About the Topic

Explaining the requirements of the EMS standard ISO14001 :2015 and OHSMS standard ISO 45001: 2018

Key Takeaways:

To create awareness about environment health and safety among the employees by explaining them the requirements of the EMS and OHSMS guidelines as per the relevant ISO standards





Open-House Online Training Program Title  
**INTRODUCTION TO BLOCKCHAIN**

**Date – August 28th, 2021**

Objective

The objective of this Webinar was to provide an overview of Blockchain and how it can transform the Business and various industries such as Manufacturing, Pharmaceutical, etc. by reducing frauds and provide end-to-end transparency.

About the Topic

This Webinar was designed to provide an overview of Blockchain and associated use cases and how its Blockchain can benefit in Quality program.

Key Takeaways

To understand the Blockchain concept and how it can help in various business use cases

Webinar Title  
**5S-AN ENABLER FOR BUSINESS EXCELLENCE**

**Date – Sept 09th, 2021**

About the Topic

A Japanese concept initially launched for manufacturing organizations is also being used for Service organization to have a better organized desk, process, manufacturing, repair



shop, store, service desk. The principles being used in any kind of organization, unit or a desk or location are same.5S is a workplace organization method that uses a list of five Japanese words: seiri, seiton, seisō, seiketsu, and shitsuke. These have been translated as "sort", "set in order", "shine", "standardize",

and "sustain". The list describes how to organize a work space for efficiency and effectiveness by identifying and storing the items used, maintaining the area and items, and sustaining the new organizational system. The decision-making process usually comes from a dialogue about standardization, which builds understanding among employees of how they should do the work.

As a concept it is being used as a foundation builder foe sustained excellence and continual improvement in any kind of industry.

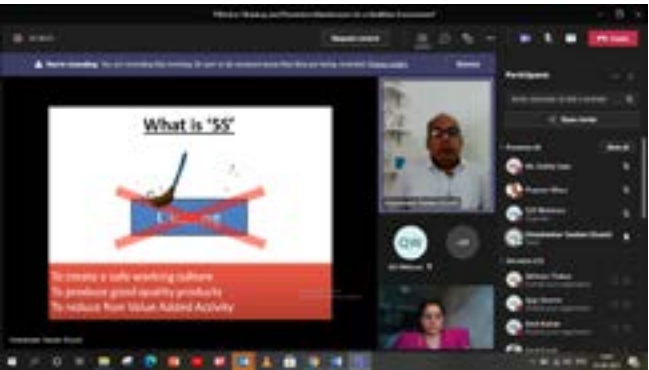
**No. of Participants: 479**

Webinar Title  
**EFFECTIVE CLEANING AND PREVENTIVE MAINTENANCE FOR A HEALTHIER ENVIRONMENT**

**Date – Sept 10th, 2021**

About the Topic

Hygiene is the practice through which people maintain or promote good health. Making themselves and their surroundings clean, cleaning and - when needed- disinfecting surfaces, units,



surroundings and items of personal use in order to break the chain of infection, all contribute to hygiene.

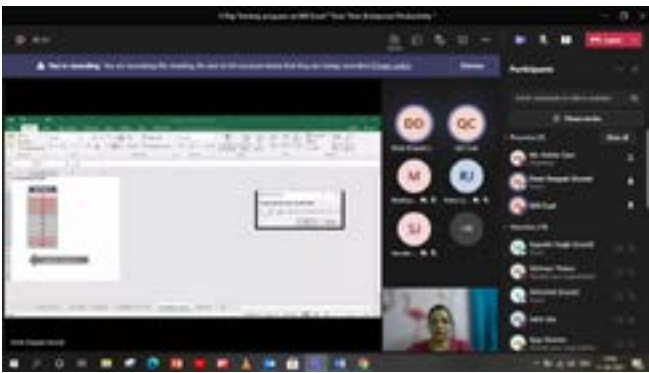
Key Takeaways:

Mindset transformation and approach to cleaner surrounding

In-house Online Training Program Title

**SAVE TIME & IMPROVE PRODUCTIVITY " EXCEL TRAINING PROGRAM"**

**Date – Sept 11th, 2021**



About the Topic

Learn advanced Excel tools like automated dashboards, scrolling charts, dynamic formats and more. Go rogue and design your own formula-based Excel formatting rules Join datasets from multiple sources with Excel's LOOKUP, INDEX & MATCH functions Manipulate dates, times, text, and hyperlink Build tools to help you automate, streamline, and absolutely revolutionize your workflow with Excel.

Key Takeaways

This workshop gave 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, it teaches through hands-on, contextual examples designed to showcase why these formulas are awesome and how they can be applied in a number of ways.

**No. of Participants: 65**

Webinar Title  
**TOTAL PRODUCTIVE MAINTENANCE (TPM)**

**Date – Sept 15th, 2021**

About the Topic

Total Productive Maintenance (TPM) is the process of maximizing



equipment effectiveness through the active involvement of all supporting departments. TPM is a philosophy aimed at eliminating production losses and keeping equipment in a position to produce at maximum capacity, with no unscheduled stops and without any Quality losses. It talks about better utilization of maintenance and production resources.

Key Takeaways:

- Competitive Environment
- Importance of TPM
- Why TPM
- Overview of eight TPM pillars
- 16 Big losses of TPM
- Changes in employee mind-set toward their job responsibilities

**No. of Participants: 260**

Open-House Online Training Program Title  
**ANALYTICAL TOOLS FOR DRIVING PERFORMANCE IMPROVEMENT**

**Date – September 25, 2021**



## About the Topic

Program focussed on Basic Analytical Tools and their application in their processes. The workshop demonstrated real life case study and data analysis exercises to understand some of the lean and six sigma concepts better. This training helped participants to identify Problem and their real root causes with data and process approach.

## Objective & Key Takeaways

- Analytical concepts like understanding Mean and Median & when to use mean or media. Importance of Standard deviation & Inter quartile range in day-to-day operations. Concepts of Normality and some Minitab learning
- Learning the basics of Lean & DMAIC methodology

- Real life project using 4 steps problem solving approach.
- Excel exercises with data analysis. Some of the basic quality tools like fish bone, why-why analysis, Pareto chart, Box plot, FMEA and their application in real project scenarios



## 10TH VIRTUAL QUALITY CONCLAVE

QCI organized the 10th VQC on “Drone Sector: A way to Quality” on 23rd July 2021. This conclave was a joint venture of NBQP & PADD (one of the constituent divisions of QCI).

The primary objective of the conclave was to discuss about how the Drone sector in India plays a crucial role in achieving

the vision of self-reliant India by understanding the current operations of the ecosystem, and pool in the necessary resources available to deliver the quality products in the market. The Conclave was conceptualized to discuss and provide platform to key stakeholders of the Drone industry to deliberate on the Importance of Quality, Safety, Security, Compliance and role of certification in the Drone sector and desirability of concrete steps to establish Drone hub in India.

## Key Objectives of Conclave

- To create awareness on the quality and role of certification in Drone industry in India.
- To help the Drone industry understand the requirements pertaining to testing of the hardware and software embedded to ascertain the safety, security and reliability.
- To help the Indian Drone industry (including component manufacturing) understand the documentation requirement and evaluation tools.

## Inaugural Session



### Welcome Address by Director & Head, PADD, QCI: Dr. Manish Pande

At the outset, Dr. Manish Pande welcomed the audience introducing the primary objective of the conclave. He further requested Mr. Sampat Suri and Ms. Vinutha (speakers of the first technical session) to enlighten the audience with their introduction, background of their respective esteemed organizations namely TQ Cert Services Pvt Ltd. & UL India Pvt Ltd respectively that are presently approved by QCI for conducting type certifications of UAS models in India.

This conclave conveyed a strong message to the Drone industry on the Importance of Quality, Safety, Security, Compliance and role of certification in the Drone sector. The theme chosen was pertinent as we all witness a growing demand and use of drones in the delivery of services including defence, law and order, transportation of critical components, healthcare, agriculture, survey of roads, pipelines etc. to name a few.



### Address by Director, Drone Federation of India (DFI): Mr. Smit Shah

Mr. Shah appreciated the efforts by Ministry of Civil Aviation (MoCA) for evolving the policy for drones more conducive for the industry to comply with. He said that it is the responsibility of all the stakeholders in the Drone sector be it QCI, the manufacturers, certification bodies, labs, etc. to scale up exporting of Indian products to foreign markets that are certified. The certification scheme is liberalised and is at a very nascent stage. A collaborative approach by all the stakeholders can resolve each and every issue be it technical or operational.

He concluded by thanking all the stakeholders involved in drafting of the drone rules that has been highly appreciated by the industry intending to bring tremendous benefits to the drone sector.



### Address by Scientist G, SAG, DRDO: Dr. N. Rajesh Pillai

Dr. Pillai stated that the scheme was institutionalised initially to check the compliance of flying of drones in a permitted area. He explained that the application was an offline verification/ approval of how, when and where a drone has been flying and whether within its permissible areas. The idea behind offline was not to push the ecosystem beyond boundaries but things changed without control citing example of Jammu incident where drones were flying without permission putting security





at stake. The securities needed to know the objective of flying, capacity whether in the private or public interest as well as whether permissible in that area.

Furthermore, he threw light on live tracking of drone flying which requires the capability to live transmission included in new policy, comprising of RFID or GSM enablement, monitoring station to transmit to ground, identification of drone, live updates at receiver's end, the software to know the authenticity of drone etc. As far as the drone's manufacturer's point of view is concerned, it might be required to specify the current position time ID to the ground in a specific format. Ministries will certainly issue some rules and provide time to implementation.



### Address by Joint Secretary, Ministry of Civil Aviation (MoCA): Mr. Amber Dubey

Mr. Dubey appreciated the efforts of the team for providing feedbacks and inputs received on Drone Rules. He further contended that the rules would be a game changer for India to become a drone hub.

In his vision, Indian manufacturers should not only focus growing in India but should be able to capture the global markets. Furthermore, he agreed with Dr. Pillai stating that the tracking system should be robust. The role of QCI was highlighted as the focal point for quality testing and certification wherein the certification scheme for drones will have fullest support of government.

### Technical Session – I



### Speaker 1: Mr. Sampat Suri, Head Certification Business, TQ Cert Services Pvt Ltd.

#### Topic Drone Scheme - Introduction about TQ Cert

Mr. Suri summarized the process flow of UAS certification scheme from application to issuance of certification explaining the role of TQ Cert Services Private Limited as one of the certification bodies approved by QCI. It was also apprised of their pan India presence with centres and project sites which are published on a map along with an overview of the organisation.



### Speaker 2: Ms. Vinutha. M. U., Quality Manager, UL India Pvt Ltd.

#### Topic Drone Scheme - Introduction about UL India

Ms. Vinutha highlighted the key features as one of the QCI approved certification bodies for the UAS Certification Scheme. She apprised the audience about their global presence, expertise, and capabilities of UL across India. It was also highlighted about UL's testing laboratory for various products and that may be utilised by stakeholders for getting certain applicable tests carried out for Drones. The details of key professionals involved for certification scheme was also shown for the participants.

### Speaker 3: Mr. C. S. Sharma, Joint Director, PADD, QCI

#### Topic Drone Scheme - Certification Process

Mr. Sharma briefed about the certification process for UAS certification scheme showcasing the flowchart of the process from application for certification till certification decision explaining each step. The discussion was also on the eligibility and documents required pertaining to the scheme and criteria for the evaluation process. Any violation with regard to compliance will result in suspension or cancellation of the certificate. The extension of scope to renew the certificate was also mentioned.

### Technical Session – II



### Speaker 1: Mr. Subhash Chand Sharma, ADG (Retd), Directorate General of Aeronautical Quality Assurance (DGAQA), Ministry of Defence

#### Topic Compliance - General, Performance, Powerplant, Structure, Material and Construction

Speaking about the Certification Scheme, Mr. Sharma explained the general compliance requirements (such as weight, CG limits, dimensions in compatible configurations, life of UAS, etc.), performance requirement (such as operating speed, range, endurance, operational altitude, ceiling height, pitch for safe

operation, stability and control), powerplant (like engine installation, fuel leakage, flight limit loads, strength and shock absorbing mechanism) and overview of the structure and material type for instance fabrication method, ID plate etc.



### Speaker 2: Mr. Lokendra Singh Chauhan, Scientist D & Officer-in-Charge (Electrical), Central Laboratory, Bureau of Indian Standards (BIS)

#### Topic Compliance - Battery

Mr. Chauhan explained the technical requirement of battery-operated UAS for compliance of cells and batteries, and the mandatory requirement of BIS certificate notified by Ministry of Electronics and Information Technology (MeitY) for all the cells and batteries.

### Speaker 3: Gp. Capt. Tapas Kumar Samanta, Regional Director (Retd.), Aeronautical Quality Assurance, DGAQA, Ministry of Defence

#### Topic Compliance - Data Link, Instruments / Equipment, Qualification Testing

Gp. Capt. Samanta gave a brief about the formalized processes and the details that are required to be documented for UAS certification. The discussion was to make the audience understand about the compliance requirements, data link, instruments/equipment and qualification testing.

A detailed deliberation was done on the definition and compliance criteria, safe landing, information of remote pilot by warning signal and demonstration at the time of site visit/flight test.





Further, the attention was drawn towards various instrument or equipment requirements, environmental testing etc.

He also emphasised the requirement of authenticated test reports from accredited labs for certain clauses in the certification scheme to ensure timely completion of evaluation

### Technical Session – III



**Speaker 1: Dr. N. Rajesh Pillai, Scientist G, SAG, Defence Research and Development Organization (DRDO)**

Topic  
Compliance - Documentation  
NPNT Compliance and NPNT  
– Drone Scheme Integration to  
Digital Sky

Dr. Pillai stated that the regulators required drones to fly only within permissible time and area. The Digital Sky Platform will monitor and inform regulator in case of any mishap. He also discussed about NPNT (however to be notified by government in future) that ensures permission to fly and submission of generated logs for compliance verification. He further discussed the features of implementing Registered Flight Module (RFM) explaining the compliance criteria and its methods of evaluation.

**Speaker 2: Mr. Shashi Kumar Vangala, Project Associate, QCI**

Topic  
NPNT Test Tool

Mr. Vangala presented a demo of the NPNT Test Tool developed by QCI and the process involved to verify NPNT requirements of an UAS with respect to the requirements of the certification scheme. He further added that a manufacturer can submit the information and pursue as many tests as possible to verify the compliance. The user manual was also elaborated.

### Technical Session – IV



**Speaker 1: Mr. Smit Shah, Director, Drone Federation of India (DFI)**

Topic: Documentation (All logs and flight manuals) & Flight Testing

Mr. Shah enlightened the audience with technical knowhow of operationalisation of flight, ad-hoc maintenance via logbooks, essential documents and manual of product to sustain ideal conditions of drone.

Talking about flight testing part, drone before flying is expected to undergo specific test like endurance test, speed test, rates of fuel consumption and battery discharge, operational altitude and determination of factors such as maintenance and control. From flight to land, a combination of seven stages were involved and discussed.

Vote of Thanks by Dr. Arul Jason, Project Associate, QCI

Dr. Jason concluded by thanking all the dignitaries, panellists, QCI experts and participants along with his team for making the event a great success. He further expressed his gratitude towards NBQP to have chosen drone sector as one of the important topics of the conclave.

30th July, 2021

11th Virtual Quality Conclave

**ENVIRONMENT  
AND CLIMATE  
CHANGE**

Registration Link :  
<https://bit.ly/3hYEppG>



### 11TH VIRTUAL QUALITY CONCLAVE

QCI organized the 11th Virtual Quality Conclave (VQC) on “Environment and Climate Change” on 30th July 2021. This conclave was a joint venture of NBQP & NABET, the constituent boards of the Quality Council of India.

The primary objective of the conclave was to discuss about impact caused due to climate change, and role of UNEP in management of environment. The Conclave was conceptualized to discuss and provide platform to key stakeholders of environment sector to deliberate on the Importance of adopting environment friendly practices.

#### Key Objective of Conclave:

- To create awareness on the environment and climate change
- Role of UNEP in environment management
- Issues & Challenges for Environment, Social and Governance in Development Economy



**Welcome Address by CEO-NABET, QCI: Dr. Manish Kumar Jindal**

At the outset, Dr. Manish Kumar Jindal, CEO - NABET apprised the audience with ongoing mishaps and condition of nature deteriorating at an alarming rate in context of our country. He suggested jotting down the necessary suggestions, ways & means to improve the quality of environment throughout the country without hampering ecological balance.

This conclave conveyed a powerful message on the distressing situation of environment and degradation of climate at forbidding rate. The theme was chosen in line with the





popularity of the subject and the technological advancement in this field, which is revolving rapidly, as reflected through their coverage in the print and technical media.



### Address by Senior Director, NABET, QCI: Mr A.K. Jha

Mr Jha enlightened audience with forte of NABET and its involvement in EIA from past ten years in association with more than 5000 experts. He stated the theme as vast subject where adverse effects viz-a-viz pollution, global warming, greenhouse effect etc are increasing at high pace affecting environment. It was further highlighted how improper waste disposal including e-waste is creating havoc in society which needs to be addressed not only at governance level but at individual level too. This cumulatively affects public health which is why the sessions have been designed to address these unforeseen circumstances.

### Technical Session – I



### Speaker 1: Dr. J.S. Sharma, Former Group General Manager (Chem.) - Head Environment, Oil and Natural Gas Corporation Ltd

### Topic Climate Change Challenges, its Impact on Petroleum Sector – Road Map for Clean Energy Transition

It summarized the challenges and implications of climate change on petroleum sector. It was highlighted that business will suffer if national oil companies will go for incremental deduction of emissions to mitigate the effect of climate change. Talking about calculations of energy produced and consumed, change creates challenge for companies dealing in core extraction of oil and gas putting the operation, reliability and growth of sector at risk. Accentuated on overall carbon dioxide fixed by 33% via atmosphere including plant and 30% by ocean through mangroves and other air-water surface interactions; however, 30% is increasing trend which can be arrested by controlling this particular sector for solution of climate change. Presented definition of term climate change, elaborated indicators, challenges & cause of concern. Several areas having impact of climate change were mentioned followed by future impact of climate change. Indicators showing drastic impact of environment deterioration were cited. Activities like no use of fossil fuel viz-a-viz petroleum or coal consumption revealed clean and better environment during lockdown.

Vision of national companies by 2030 were stated where reducing the emission values was underlined. In petroleum industry, carbon tracker & IEA have run various models to formulate carbon budget projected by 2050. It was estimated that to limit global warming where probability of occurrence is 80%, limiting release to 565 gigatons of CO<sub>2</sub> is a big challenge. Whereas probability considered to be 50%, not more than 886 GT CO<sub>2</sub> can be released. This further reveal that only 20 % will be enough to raise 2-degree scenario.

It was believed that energy security will be under threat. The present scenario coupled with current petrol petroleum price economic recession will hamper the growth and existence of the E&P companies. It is very important to adopt a goal to achieve at least net zero anthropogenic CO<sub>2</sub> emissions in order to stabilize global temperature level. Energy transition is required to low carbon or no carbon biofuel policy in order to achieve sustainability. Furthermore, all three phases entailing roadmap for mitigation and way forward was elaborated.



### Speaker 2: Dr. G.K. Pandey, Former Adviser, Ministry of Environment, Forest and Climate Change and Former Expert Member, NGT

### Topic Role of UNEP in Management of Environment

Dr Pandey briefed about the history and mandate of UNEP illustrating various environment programmes and international conventions focussed on waste management. He threw light on accumulation of lead, chromium and persistent organic pollutants (POPs) affecting environment. UNEP Agenda 2030 stresses on finding better solutions to pollution, climate change and prevent biodiversity loss etc. It focusses on achievement of 17 sustainable development goals (SDGs) aiming at reduction in poverty, hunger, gender equality, clean water and sanitation, affordable and clean energy, sustainability, life below water, life on land, institutional strength as well as mutual participation.

Dr Pandey gave insights of UNEP target to bring down carbon dioxide emissions and greenhouse gas emissions enlisted below:

- Increasing renewable energy
- Switching to electric vehicles
- Controlling methane level
- Reducing power plant and industrial emissions
- Replacing Diesel/CNG buses and switching to metro rail
- Reducing consumption pattern
- Electrifying buildings and appliances

The session was concluded by elucidating emerging issues/ trends drawing attention towards waste management, health impacts of pesticides & fertilizers, environmental impacts of

anti-microbial resistance, governance, policy, legal and institutional strengthening and capacity building. Envisages national development contribution binding every country to cut down their CO<sub>2</sub> emissions unlike developing countries like China under Kyoto protocol. Alternatively, under Paris Agreement, every country has to provide their future prospects enlisting programs and activities to control their CO<sub>2</sub> emissions. UNEP brought various multi environmental agreements which were implemented by various countries and guidelines to handle & manage e-waste. Emphasised on implementation of sustainable development goals was also taken into view.



### Speaker 3: Dr. H. Sinha, Socio-Economic Expert

### Topic Issues & Challenges for Environment, Social and Governance in Development Economy

Dr. Sinha described origin of Environment Social Governance (ESG). As mentioned in 2006 United Nation's Principles for Responsible Investment (PRI), demand rises exponentially when 63 investment companies signed with \$6.5 trillion incorporated ESG issues under 'Assets under management', later rose to \$80 trillion in 2019. He stated that ESG has been related to financial performance globally reporting social and environmental impacts.

He further highlighted that work for climate mitigation is taking place at large scale but impact perceived is still a question to debate. ESG addresses governance risk, social risk, climatic risk to link environmental protection. A paradigm shift has been observed in market and policy expectations from backward looking view on past performance to a forward-looking assessment of future risk and opportunities. He charted out a





comparative analysis of twelve frameworks with respect to year of establishment, environment, social, governance, finance, economy, total industries registration and reporting system. Moreover, he provided insights of six major issues pertaining to ESG including but not limited to CSR and social audits. The observation of missing link for ESG in India was highlighted. Existing different laws pertaining to minimize risk in India were elaborated. He threw some light on three main approaches in ESG indicators – welfare approach, rights approach and sustainability approach.

ESG Scheme was formulated owing to country’s industrial setup, policy framework for ESG disclosure evolved with three objectives:

- Making inventory of company’s assets of ESG and assessing their impact through 17 SDGs and enumerating ESG Scores.
- Corporate ESG score disclosure requirements, as codified in securities regulation, stock exchange listing rules and other legislation.
- Financial-sector specific requirements, through policies and regulations affecting banks, insurers and investors.

The aforementioned scheme is open to all industries (manufacturing/trading) complying ESG framework pertaining value addition. He further enlightened with ESG matrix citing examples of ESG funds where it was stated that ESG is at nascent stage in India as compared to global markets. It was concluded by stating that India has full potential to run ESG integrating structure, parameters and expertise.

Dr. Sinha presented ONGC’s initiatives on climate change for emission reduction & low carbon technologies elucidating the registered projects which are earning 1.8 million Certified Emission Reduction (CER).



Vote of Thanks by Ms. Pooja R. Shukla, Assistant Director, NBQP

Ms. Shukla conveyed the gist and importance of conclave. She mentioned that the conclave was an effort to generate awareness addressing need of the hour. She thanked honourable speakers, participants, NABET Team, Media Team, IT Team and her NBQP Team to make the event a great success.



12TH VIRTUAL QUALITY CONCLAVE

QCI organized the 12th Virtual Quality Conclave (VQC) on “Improving Credibility of Learning Service Provider (LSP) through Accreditation” on 06th Aug 2021. This conclave was a joint venture of NBQP & NABET, constituent boards of QCI.

The primary objective of the conclave was to discuss about Improving Credibility of Learning Service Provider through Accreditation. National Education Policy (NEP) 2020 emphasizes on continuous lifelong training, education and skill development enabling each professional to remain relevant in employability market. Training refers to an act of inculcating specific skills in a person. Education/ Training is the process of enhancing the skills, capabilities and knowledge of graduates for doing a particular job with quality. Education/ Training process moulds the thinking of employees and leads to quality performance of graduate trainees. It is continuous and never ending in nature.

Accreditation is a process of establishing the competence of Education/ Training Provider delivering the requisite elements of Education/ Training Provider and its ability to carry out an evaluation of competence acquired by the Learners.

Key Objectives of the Conclave:

- Improving quality of Learning Service Provider (LSP) through Accreditation
- Highlighting difference between Accredited and Non-Accredited Training Institute
- Enumerating improvement in credibility of an Institute through Accreditation

Benefits of Accreditation are as follows:

- Mark of Distinction between Accredited and Non – Accredited Courses
- Course Delivery Mechanism of Accredited Course Provider Verified
- Course Provider deployment of Competent Faculty for delivery of Courses
- Security and Confidentiality of Data being shared with Course Provider
- Employer Stakeholder professionals Prefers Accredited Course Provider Over Non-Accredited Course Provider





## Inaugural Session



### Welcome Address by Director-NABET, QCI: Dr. Indrajit Bhattacharya

At the outset, Dr. Bhattacharya initiated the inauguration by welcoming all the speakers and attendees; introducing the inception of QCI and NABET. A detail presentation was given about the boards, divisions, training and services provided by QCI. He further elaborated the objective of conclave and role of accreditation in development.

This conclave conveyed a strong message on the role of NABET & the new scheme on quality & accreditation for the society and the country. The theme was chosen in line with the need of accreditation for the betterment of society. QCI expressed its gratitude to the eminent speakers who agreed to share their knowledge and experience, being authorities in their respective technical domains.

### Address by CEO-NABET, QCI: Dr. Manish Kumar Jindal

Dr Jindal addressed the audience and eminent speakers with introduction of skill development programme aligning it with ongoing schemes. He further elaborated that change of mind and attitude is necessary toward skill trained employability. It was also highlighted how people should be competent for self-learning, continuous learning as well as automatic upgradation for acquiring new skills relevant to future prospects citing examples.

In order to enhance the skill of youths entering into job market, number of programs have been initiated by Govt. of India such as Deen Dayal Upadhyay Grameen Kaushal Yojana (DDGKY), Skill programs under various Sector Skill Councils (SSC) operated by under National Skill Development Corporation (NSDC), Ministry of Skill Development and Entrepreneurship. These skill

enhancement related programs are being conducted since quite some time; however, the outcomes in terms of employability are not very encouraging, besides the low acceptance levels resulting in its shortfall to fulfil the societal, emotional and much needed financial support to youths. It was remarked that India does not have a mindset of giving credibility to skilling; unlike the western countries. Typically, 70% in Germany and Japan undergo vocational education in skilling vis-a- vis 5% of Indian going through vocational educational in skilling and this mindset needs change for skilling youths in India; which is critical to meet US \$ 5 trillion economy. Typically, Indian parent does not look forward for his ward going for brown collar job that results in skewed employment opportunities.

Role of private players was accentuated explaining different short-term offerings for pre-declared skill sets. Offerings of some of the unorganised players do not follow statutory or academic regulation which regulates the skill training ecosystem. Accreditation is thereby essential to address the quality of benchmarking to ensure accountability and trust of client.



### Special Address by Vice Chancellor, DSEU: Smt. Prof. (Dr.) Neharika Vohra

Prof. (Dr.) Vohra shared her experience regarding ISO standards and agitations raised by organisations during audit planning process. She explained the merits and significance of accreditation.

She mentioned three things important for accreditation are:

- Maintaining quality on daily basis
- Change in mindset
- Value addition

There is an urgent need to lay a foundation for development of quality manpower and accreditation would play a major role in addressing the need.

### Address by Joint Director, QCI-NABET: Mr. Anurag Rastogi

Mr. Rastogi briefed the sessions and concluded the inaugural session. He summarized that the need of the hour is to bring changes in way skill programs are being imparted so that they could become more relevant in current scenario at the one end as well as improving the quality of training programs being conducted at various training institute for enhancing the skills of youth. He thanked all the panellists for their immense support and knowledge sharing.

## Technical Session – I



### Speaker 1: Sh. P.R. Mehta, Chairman NABET Technical Committee & Board Member

#### Topic Leveraging benefits for LSP through Accreditation

He summarized the structure, processes and transparent system of accreditation in education field. It is important from society as well as employer perspective to gain hands-on experience on quality improvisation of education. He highlighted the role of several institutions in providing accreditation and meeting the nation's goal. He further mentioned that NABET considers accreditation not only as certification scheme but emphasises on gaps, outcome and end results. Qualitative improvement of education is linked with development but whether it serves the right purpose is still questionable.

Accreditation shares the concept of skill, knowledge and competency in relation to personal and professional growth. Educational institution and aspiration of society should go hand-in-hand to impart three things: enabling facilities, process of learning and assessment of achievements. Lastly, accreditation

should be implemented by third party having expertise in assessment with proper methodology and train every institution to hold a self-assessment.



### Speaker 2: Maj. Gen. N.K. Dhir, NABET Trainer & Assessor

#### Topic Perspective of NABET Accreditation Scheme

He acclaimed the participants as quality conscious and quality improvement initiators but apprised the need to sustain the initiative. He elaborated the development of accreditation of learning service providers delivering courses via online, face to face and blended mode. The quality assurance operates by planning, auditing and review. It was mentioned that the accreditation is a form of recognition/certification to ascertain that the organization is conforming to requirement as stated in criteria. The process and stages of accreditation were explained in detail.



### Speaker 3: – Dr. V. K. Singh, Managing Director, Innovatio Curis





Topic

## Role of Accreditation for LSP in Healthcare sector

Dr. Singh highlighted certain deficiencies and basics which need to be taken care of during this pandemic. He highlighted that the healthcare system has deteriorated at an alarming rate amidst the current Covid situation where supply chain management, logistic system and overall situation has been revealed.

He emphasized the points to improve the quality of training being imparted in Healthcare Sector; with quality training focusing on Nursing and allied healthcare professionals. Deliberations also focused emerging scenarios post announcement of The National Commission for Allied and Healthcare Professions Act, 2021.

Accreditation of hospitals initiated in lieu of health tourism as perceived by CII as a commercial interest. He mentioned that the first hospital was accredited in 2007 and subsequently around 89,000 healthcare providers, 11000+ in government sector and few other were accredited accounting for only 30% healthcare system. Several missions and systems were established but needs implementation experiencing huge transformations.

Furthermore, examples of disabling pacemakers were quoted wherein mission failed due to cybersecurity. The paramedics, now being called as allied health professional, were trained and as expert to encounter such situation by universities, associations and medical experts. The biomedical waste generated at such alarming rate needs to be addressed for which training has to be supported at large pace, failing to which will create a cumbersome situation.

Isolation centers have been developed amidst the current scenario as centralized air conditioning would have increased the chances of infection spread. Accreditation and accrediting healthcare professionals should be encouraged as one system to get a safe, sound and healthy life.



**Speaker 4: Prof. P. S. Grover, Director General, GTB Institute of Technology**

Topic:

## Role of Accreditation in Higher Education

Prof. Grover highlighted that the increase in pace of web-based education and technology advancement has created a sense of urgency or sheer understanding of accreditation in fields of education under NEP 2020. Quality provision in this sector is major responsibility of education providers holding assurance and achievement of higher education.

Accreditation in higher education implies establishment of norms and standards in education sector. It involves continuous assessment, skill oriented and sustainable development. It should have a vision, mission and commitment towards achieving desires. The quality of education decides the learning of student and verifies the procedure of self-assessment. Accreditation is criteria based and parameters governing statutory, academic and financial management. Ensuring quality is an international concern so it is very important to focus on outcome-based education with clear objectives of program.



## Vote of Thanks: Mr. C K Biswas, CEO, NBQP

Mr C. K. Biswas, CEO, NBQP thanked all the participants and the panellists and his team to make the event a great success. He also recognized the support of NABET in organizing the conclave.



## 13TH VIRTUAL QUALITY CONCLAVE

QCI organized the 13th Virtual Quality Conclave (VQC) on “Protection of Child Rights: Towards a Brighter Future” on 27th Aug 2021. This conclave was a joint venture of NBQP & PADD (one of the Divisions of QCI).

The primary objective of the conclave was to discuss about creating enabling environment for protection of child rights in India in an integrated approach. Emerging legal, regulatory and ‘best practices’ frameworks in Indian industry sector and global governance models suggest that there is an enhanced focus to establish systems that protect the human rights including rights of children. The significance of the matter is also directly aligned to Sustainable Development Goals, particularly Goal#8, ILO Guidelines and UN Guiding Principles on business and human rights. The Conclave was conceptualized to discuss and provide platform to key stakeholders in the sector to discuss upon different domains that have bearing on protection of child rights and creating conducive forums for brighter tomorrow.

## Key Objectives of Conclave:

- To create awareness on the protection of Child rights in Indian industry sector.
- To help businesses understand the different domains in the child care and related aspects in relation to ‘Good Practices’.
- To nurture an integrated approach with the objective of aligning businesses with key SDGs.

## Inaugural Session





## Welcome Address by Director & Head, PADD, QCI: Dr. Manish Pande

At the outset, Dr. Pande underlined the significance of protection of Child Rights specifically within Indian industry ecosystem in the larger context of business and human rights. He iterated on the MoU signed between QCI and NCPDR for conducting fact finding cum audit exercises for ascertaining Child Labour in different industry sectors including the supply chain points. This is also an initiative towards achieving the Target 8.7 of the 2030 Sustainable Development Goals, which calls on governments around the world to end child labour by 2025. The concerns were further highlighted owing to the disruptions arising out of Covid-19 pandemic in areas of education, nutritional security, health and family support and cases of child labour. The steps have been taken by the government in this regard to prevent any violation of child rights.

comprehensive action can be initiated to ensure no violation of child rights take place. International best practices and guidelines may also be harmonized as it also acts as a boost to ease of doing business and promotion of exports.



## Address by Senior External Consultant, S K Mittal & Co. & Former COO, SafeEducat: Mr. Kenneth Khalkho

Mr. Khalkho gave an overview on what exactly are child rights. He explained the same in national and international context. He also detailed out on the placing of protection of child rights within SDG framework. He also explained that there's a need to adopt an integrated approach wherein the responsible business principles and business prospects would go together.

## Technical Session – I



## Speaker 1: Mr. Dushyant Meher, Consultant, NCPDR

Topic  
Children in Street Situations:  
Introduction, Available

## Mechanisms and Small Businesses

Mr. Meher talked about the guidelines developed by NCPDR on 'Children in Street Situations' stating about the definitions of children in street situation, the broad three categories and further segregation of same into 11 categories. He also outlined the various available mechanisms for redressal, rehabilitation and rescue of children and mentioned about how government, civil society organizations and judicial systems together supplement each other in establishing safer environment for children in difficult situations. It was also mentioned that one of the categories of children in street situations where sale of objects on the streets is also categorized as beggary among children.

Therefore, there is also a need to establish systems that aim to inculcate principles of responsible business in small enterprises.



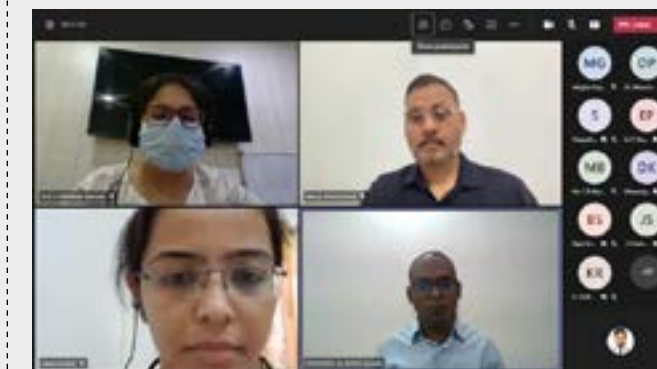
## Speaker 2: Ms. Reena Thakur, CDPO, Rajnandgaon, Chhattisgarh

Topic  
Experiences of working on  
ground on concerns of Child care

Ms. Thakur talked in detail about her role of block level child development project officer in protection of Child rights in different domains such as nutritional security, health, children in need of care and protection under ICPS. She mentioned about her role as Child Marriage Prohibition Officer. Illustrations through different case studies also provided the context that plays critical role in determining ways to deal with complex situations.

The patriarchal notions perpetrated in the society compromise the rights of young girls. She also iterated how strategies that

aim to involve community leaders such as holding meetings with faith-based leaders help in mobilizing the community towards the greater good.



## Speaker 3: Mr. Manoj Bhatt, Founding Trustee and CEO of GoodWeave India

Topic  
Importance of applying holistic  
approaches to protect Child  
Rights

Mr. Bhatt gave context to the issue of child labour in terms of how the demand for same is generated and supply is provided and then there's flow of the same. He stated that it is needful to break the flow to deal with child labour effectively.

There is need to understand that informal sectors without availability of effective monitoring systems, there's grave concern of child labour and demand is generated through such sectors and supply is from the contexts where children are not in formal education systems or such vulnerable situations.

Agriculture has also been one of the sectors that saw cases of child labour frequently. However, in current times, the rise is seen in service sector. There's also need to go deeper into the concerns of linkage with provisions under right to education. Enrolment ratio and long-term absenteeism or absenteeism recorded during specific period of the year need to be seen in larger context.

He underlined there's need to relook at the status of education with respect to bonding in the school with communities, teachers and students and undertake efforts to improve it further. Therefore, it is essential to adopt holistic approaches for protection of child rights.





## Technical Session – II



**Speaker 1: Ms. Nandini Sharma, Centre for Responsible Business**

**Topic**  
The opportunities and challenges in developing child labour free supply chains in India

Ms. Sharma talked about protection of child rights as component of human rights as a whole. She also talked about human rights protection from larger business principles.

It was iterated by her regarding interplay of market forces and inter-linkages between various human rights components viz labour rights, gender, wages and so forth. National Action Plan on Business Rights launched by the government is in line with the international trends and best practices on responsible business principles. This was also underlined by the then UN Secretary General Mr. Kofi Annan. She further highlighted the nine principles within the same and how same has also been integrated into Business Responsibility and Sustainability Reporting released by SEBI of which child rights protection is key component.

It is necessitated that monitoring be also done diligently in supply chain. It is challenging in informal sectors including, agriculture. However, this where also the opportunity lies to align these sectors with innovative thinking keeping in mind the rights-based approach for tackling concerns of child labour.

**Speaker 2: Ms. Shraddha Marathe, Consultant Dietitian at Medfemme**

**Topic**  
Shifting dietary habits of children & trends in food industry

Ms. Marathe discussed about the changing food habits of children with increase in consumption of junk foods and convenient foods. Regarding this, she identified different factors such as family members, television and media advertisements and food industry. In her further discussion, she emphasised upon the children's right to food and significance of balanced diet in not merely growth of children but also future of the country.

It was highlighted how the discourse has changed now from narrower concept of food security to nutritional security. This also is directly aligned to the Sustainable Development Goals. She further talked about certain action points for bringing in the desired change in dietary habits of children through the initiatives from FSSAI, reducing consumption of foods with high fat and carbohydrate content, adopting from diverse foods.

There is a need to promote local, seasonal and traditional foods to promote diversified foods. She also talked in detail regarding how even festive foods are nutrition rich foods. In addition, she posited questions on how nutrition could earlier be sourced locally such as vitamin C through fruits sold outside school campuses.

**Speaker 3: Mr. Parag Dutt Kaushik, National Manager, SGS**

**Topic**  
Child Labour Monitoring in the unorganized and informal supply chain

Mr. Kaushik talked about the various processes that may be involved in tracking child labour in Indian industry sector as a third-party body. He covered aspects including social compliance assessment in organized sector, defining child labour monitoring, processes of child labour monitoring, remediation and follow up plan, benefits that child labour monitoring entails, and other key challenges in the concerned processes.

He highlighted key components of social compliance monitoring viz. child/ young labour, forced labour, wages, working hours, wages and benefits, discriminations, disciplinary practices, freedom of association, health & safety and environment. He outlined different kinds of verifiers utilized to ascertain any incidence of child labour regarding age proofs etc. as well as requirements as per law to report the incident if reported to the labour inspector.

Regarding process of child labour monitoring, he listed the key attributes such as risk evaluation and supply chain mapping, full transparency and traceability, home working activities

and referrals. He also outlined processes under assessment and verification and under remediation and follow up. Key challenges that he identified in the informal sector were forced labour, health and safety concerns, social security and low and irregular wages and lack of proper employment contracts.

**Vote of Thanks by Mr. C. K Biswas, CEO - NBQP**

Mr Biswas thanked all participants and the panellists and his team to make the event a great success and acknowledged the support of PADD in organizing the conclave.



## 14TH VIRTUAL QUALITY CONCLAVE

QCI organized the 14th VQC on "Accreditation Schemes for Ground Water and Exploration & Mining Plan Consultant Organizations in India" on 30th Sep 2021. This conclave was a joint venture of NBQP & NABET.

The primary objective of the conclave was to bring awareness and share insights of the Schemes and the importance of Accreditation for the Ground Water Consultant Organizations

(GWCO) and Exploration Agencies and Mining Plan Preparing agencies (APA-MPPA).

## Key Objectives of Conclave:

- Creating awareness among:
- Ground Water Consultant Organizations
- Exploration agencies in Coal and Mineral Mining
- Mining Plan preparing agencies in Coal sector





## Inaugural Session



### Welcome Address by CEO, NBQP: Mr. CK Biswas

At the outset, Mr. Biswas welcomed the audience introducing the primary objective of the conclave and briefed about QCI. He enlightened the audience about the constituent boards of QCI and their expertise.

He then expressed his gratitude to the Chairman, AC Committee, APA-MPPA for agreeing to give his special inaugural address focusing on accreditation scheme of ground water and exploration and mining plan.



### Address by Chairman, AC Committee, APA-MPPA: Prof. B. B. Dhar

Prof. B. B. Dhar began his address by thanking QCI for holding the conclave on extremely pertinent topic and how QCI has made an impact on quality of groundwater, coal and mines via accreditation. He iterated that India is rich in mineral sources and stressed on importance of mineral wealth required to be taken into consideration by modifying the schemes and inviting the private players in exploration of coal, lignite and mineral sector.

He mentioned that people who are involved in Accreditation Committee and Technical Committee are top experts of this sector to advise in cases of decision making for acceptance or rejection of applications. Furthermore, he suggested to take user feedback and strengthen the process for good.

## Technical Session – I



### Speaker 1: Mr. A.K. Jha, Senior Director, NABET

## Topic Introduction on Ground Water CO and Exploration & Mining Scheme

Mr. Jha apprised the audience that government has mandated QCI-NABET for operating the three schemes highlighting the eligibility of an organisation namely:

1. Scheme for Ground Water Consultant Organizations (GWCO)
2. Scheme for Prospecting/ Exploration (APA) and Mining Plan Preparing Agency (MPPA)
3. Scheme for Accreditation of Exploration Agencies in Mineral Sector (AEA)

The criteria of accreditation scheme for an organization includes Qualification, experience, competence of experts, field investigations & laboratory arrangement, Quality management systems, Quality of reports, Infrastructure and other enabling factors were discussed. Three types of assessment process were elaborated in detail as mentioned below:

1. **Initial Accreditation (IA)** will be to identify the potential of organisation.

2. **Surveillance assessment (SA)** is primarily done to judge the performance of organisation. It is done after 18 months of IA/RA.
3. **Reaccreditation Assessment (RA)** is done on completion of 3 years from IA. In RA, the emphasis is on the consistent quality achieved by ACO during period of accreditation.

Each type of assessment will be accomplished via three stages such as Desktop assessment, technical assessment and office assessment.

The role of Accreditation Committee was explained. A proper grievance redressal mechanism has been put in place and details are mentioned in the scheme document available on NABET website. All the three schemes were stated as mentioned below:

## Accreditation Scheme for Ground Water Consultant Organizations (GWCO)

With the background of over-exploitation of groundwater and statutory requirement of NOC for groundwater usage, a hydrogeological report is required to be prepared by 3rd party consultants organisation. The complete requirements of the scheme along with the evaluation parameters and the scope of accreditation were also explained. The complete details of scheme are available at NABET web portal.

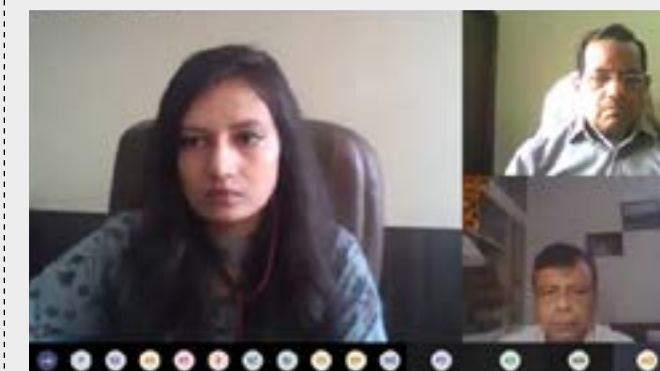
## Accreditation Scheme for Prospecting/ Exploration (APA) and Mining Plan Preparing Agency (MPPA) [For Coal Sector]

Introduction of commercial mining allows Private Companies vide Govt. order dated 27.02. 2018 under Mines (Special Provisions), Act 2015 and Amendment to MMDR Act 1957 were highlighted. Private sector participation in coal sector was introduced by government for competition and transparency. The need for competent Exploration and Mining consultant Organization was felt with the allocation of potentially commercial (G2 & G3) coal blocks for mining. QCI-NABET has launched the Accreditation Scheme for Exploration/Prospecting and Mining Plan Preparing Agency and consultant organisations (APA /MPPA) vide Ministry of Coal, Govt. of India notification GSR 331 (E) dated May 29, 2020. Complete detailed scheme document is available at NABET web portal.

## Accreditation Scheme for Accreditation of Exploration Agencies in Mineral Sector (AEA) [For Mineral Sector]

With the amendment to MMDR Act in 2015, the activities related to exploration were only done through Central and State Government companies/agencies for auction of mineral blocks. MMDR Amendment Act 2021 by amending the section 4 allows the private explorers also to work towards identification of new blocks suitable for auction. Therefore, there is a requirement of verified private Exploration and to fast-track the exploration and Mining activities in the country.

Ministry of Mines, Govt. of India mandated QCI-NABET for Accreditation of Exploration Agencies in Mineral Sector vide latest order dated August 12, 2021 under the second proviso to sub-section (1) of section 4 of the Mines and Minerals (Development and Regulation) Act, 1957. The scheme will be launched on NABET web portal shortly.



### Speaker 2: Dr. Dipankar Saha, Former Member (Headquarters) CGWB and former Member Secretary, CGWA.

## Topic Importance of GWCO Scheme and Its outreach

No Objection Certificate (NOC) is required for extraction of ground water from central ground water authority wherein organisations have to submit a comprehensive hydrogeological report or impact assessment report by Ground water consultant organisation (GWCO). He explained the situation of groundwater globally along with the importance and availability of groundwater in meeting the domestic and commercial





demands. He also explained the 14 principal aquifer systems in India, aquifer configuration in detail and broad classification of aquifer across India. Furthermore, he discussed about the results of unsustainable extraction of groundwater and its changing trends. Year-wise comparison and depletion of groundwater resources were picturised. Dr. Saha explained the power and functions of CGWA. Presented details of notified areas and authorities of officers in these notified areas were charted out. He further explained the exemptions from seeking NOCs, the format of a comprehensive hydrogeological report or impact assessment report was discussed. He concluded by iterating the importance of accreditation in Ground Water Consultant Organizations.



**Speaker 3: - Mr R. K. Sinha, Former Controller General, Indian Bureau of Mines (IBM)**

## Topic Unfolding Regulatory Regime to Augment Mineral Resources

Mr Sinha gave context to the regulatory regime reform in terms of four factors mainly transparency, security, ease of doing business and exploration in relation to MMDR amendment act 2015. Under this act, several legislations of mineral development were explained. The background of introducing coal mines special provision acts 2015 was discussed. He threw light on update done in Mineral Development Act, from time to time.

The important aspects of good quality geological report were also explained. A provision of exploration of mineral development rule 2017 along with a number of concerns and challenges were highlighted for a credible system and evaluation.

## Concluding Remarks & Vote of Thanks: Mr. Jagminder Kataria, Deputy Director, NABET - QCI

Mr. Jagminder Kataria, Deputy Director, NABET - QCI concluded all three technical sessions briefly and highlighted the utmost important points delivered by eminent speakers. He further concluded by thanking all participants and the panellists and his team to make the event a great success.



**QUALITY COUNCIL  
OF INDIA**  
Creating an Ecosystem for Quality



## QUALITY COUNCIL OF INDIA ANNOUNCES 14TH CYCLE OF QCI - D.L. SHAH QUALITY AWARD (PROJECT BASED)

We are pleased to announce and invite applications for the 14th edition of the prestigious QCI – D.L. Shah Quality Award 2021.

It is one of the most coveted Awards at the National level. Started in 2007, every year these Awards are given to the outstanding projects of establishments within India who have ensured continuous improvement on three aspects, namely: -

- Operations and processes
- Customers'/stakeholders' satisfaction
- Products and/or services

### WHY QCI – D.L. SHAH QUALITY AWARD

- Provides a special recognition to the organization and its projects
- Provides motivation and stimulates continual improvement within the organization
- Builds the customers' and stakeholders' confidence in the organization

**There are 3 levels of the Award :- PLATINUM, GOLD, SILVER**

### ELIGIBILITY CRITERIA

**The Award is open to any kind of establishment within India like:**

- |                        |                          |           |           |
|------------------------|--------------------------|-----------|-----------|
| • Any Govt. Enterprise | • PSU                    | • NGO     | • MSME    |
| • Manufacturing        | • Healthcare             | • IT/ITES | • Finance |
| • Infrastructure       | • Education              | • Service | • Pharma  |
| • Food                 | • Petroleum, Oil and Gas | • Others  |           |

Sectors covered by GoI under Udyog Manthan are encouraged to apply

**Last date for submission of applications : 31st December, 2021**

### AWARD PROCESS

Online Application by the Organization -> Document Assessment -> Project Presentation -> Site Verification -> Final Selection by the Jury.

3 projects per unit/plant location can apply

### AWARD DISTRIBUTION

The winners will be selected by the Jury from QCI and D.L. Shah Trust and recognized during the Quality Conclave.

### FOR ANY OTHER QUERIES, PLEASE CONTACT :

Shruti Gupta - shruti.nbqp@qcin.org

**Mob : 8800891834, +91-11-2332 3415, Ext : 306**

Priyanka Maithani - priyanka.nbqp@qcin.org,

**Mob : 8178602471, +91-11-2332 3415, Ext : 305**

### HOW TO APPLY :-

The application needs to be submitted online.

Please visit

**<https://www.qcin.org/nbqp/dsa/Home/home.aspx>**  
for registration and further details.



**C S Sharma**Joint Director  
PADD, QCI**Reeti Mahobe**Junior Associate  
PADD, QCI

# Pushing towards Responsible Businesses through Effective Monitoring Mechanisms for Child Rights Protection

Beyond the unprecedented health impact, the COVID 19 pandemic has been catastrophic for the global economy and businesses and is disrupting manufacturing and Global Value Chains (GVCs), disturbing different stages of the production in multiple locations around the world and in India. Furthermore, the pandemic has accelerated the already ongoing fundamental shifts in GVCs, driven by the aggregation of three megatrends: emerging technologies; the environmental sustainability imperative; and the reconfiguration of globalization. Besides, the devastating impact was felt in key social determinants including people's livelihoods, rise in abject poverty, and reports of rising child labour in several sectors are rife. There's an absolute need

to reverse the situation as Covid- 19 has emerged the 'great revealer' bringing to the fore the stark inequities in terms of health, nutrition, jobs, education and so forth.

India has emerged as the 2nd most attractive and sought-after manufacturing destination globally, stated Cushman & Wakefield 2021 Global Manufacturing Risk Index. This has come out as a huge opportunity for India to position herself as the Global Manufacturing Hub. This can further be placed as distinctive one by following international best practices in the domain of social compliances respecting human rights thereby also boosting exports manifold with sustainability principles remaining intact.

A report by the International Labour Organization (ILO) and UNICEF has warned that 9 million additional children are at the risk of being pushed into child labour by the end of 2022 globally, as a result of the pandemic. In India, the closure of schools and the economic crisis faced by the vulnerable families, triggered by the pandemic, are likely drivers pushing children into poverty and thus, child labour and unsafe migration.



Internationally, the ten principles identified by UN Global Impact, specifically under Principle 5, and UN Guiding Principles on Responsible Business Conduct give high emphasis on this aspect recognising that sustainability begins with doing principles-based business.

Several Scandinavian and other European countries have notified the spirit of child rights protection in their standards, plan of action or standards. For instance, Italy under her National Action Plan on Business and Human Rights, the government over there is reviewing its existing legislative reform introducing human rights due diligence for companies. Similarly, Canadian government had issued a call for action on 'Ending all forms of child labour in supply chains, public consultation for which is underway. In 2019, Netherlands also came up with the "Child Labour Due Diligence Law" requires companies selling goods and services to Dutch end-users to determine whether child labour occurs in their supply chains. This emphasises that in order to boost exports further, we must also strengthen our systems further to curb child labour or violation of child rights in any form in the Indian industry sector.

Quality Council of India has also been frontrunner in this regard in its various initiatives. One of the initiatives that QCI has embarked upon is through proactive engagement with the country's top Child Rights body, that is, National Commission for Protection of Child Rights through an MoU signed which aims at conducting fact-finding cum audit studies on ascertaining child labour in Indian industry sectors in comprehensive manner.

In the strategy paper released by NITI Aayog titled Strategy for New India 2022,

among the four main sections, namely 'Drivers', 'Infrastructure', 'Governance' Inclusion has been categorized as a distinctive section. This reiterates that in India's growth story, the case for economic growth is intertwined with equity and thus essentially aims at human development in holistic manner.

Talking specifically regarding status of protection of child rights in India, Mr. Guruprasad, Country Director of Educo in India, stated, "Among the various groups affected by the global pandemic, children remain one of the worst-hit across the globe. The pandemic has triggered a massive increase in the cases of abuse and violation faced by children in India as well. The condition of working children and children in forced or bonded labour in the country has only worsened in the light of COVID19 pandemic."

Mr. Mathew Philip, National Convenor, Campaign against Child Labour (CACL) shared many cases of inhuman treatment of children at work and highlighted, "The reports from our state chapters confirm that there is a huge increase in the volume of children labour. A child can face hazard not only in the form of physical harm, but also in the form of violence, ill-treatment, torture and sexual abuse. The myth of regulating work conditions for children has to be broken. There is a need for total prohibition of employment of children up to the age of 18 years and their engagement in compulsory education and skill building."

As also outlined by Chairperson, NCPCR, Shri Priyank Kanoongo, the focus of project is not limited to merely manufacturing sector but owing to vulnerabilities witnessed aims to cover service, supply chain as well as disposal chain. He also underlined that Indian

legislative framework is stringent enough to put a curb on any malpractices with regard to child rights, the key is to ensure effective implementation and that industry sector itself undertakes that responsibility. In this regard, QCI had also held a virtual quality conclave which saw speakers from varied backgrounds. The discussion revolved around scope of child rights in responsible business practices as an integrated approach, Sustainable Development Goals, experience sharing of working on ground in the areas of child rights, ways and means of conducting fact finding studies regarding child rights within complex on field realities and attributes of third-party verification for finding instances of child labour.

The approach for conducting audit exercises to ascertain child labour would essentially include review of policies/ procedures/guidelines/work instructions/ child remediation plan, verification of documents for age, review of supplier audit reports, interaction with workers/ employees, interaction with relevant stakeholders i.e. NGO/Hospitals/ Dhabas/Schools/local authorities/OEMs/ Homeworkers and Analysis of media/ regulators/NGO/ reports. In order to broaden the scope, the checks aligned to related child rights acts may be incorporated such as right to education act, juvenile justice act among others. It would be a good start if different sectors with high risk are first taken up that would act both as audit exercise as well as monitoring mechanism for the future course.

Thus, it is in the right spirit for the businesses to adopt sustainable and responsible approaches which has the potential to positively shape up the future.







**Dr. Indrajit Bhattacharya**

Director  
NABET, QCI

# AI and Education

**AI**  
Education

**AI in**  
Education

**AI for**  
Education

The importance of Artificial Intelligence (AI), has been emphasised by the government through Virtual Global Summit by Ministry of Electronics & IT (MEITY) ; Responsible AI for Social Empowerment(RAISE) 2020. Further to it, [www.indiaai.gov.in](http://www.indiaai.gov.in) hosts the next developments of applications of AI in various sectors. Currently it displays 393 results for 'AI in education'

It is predicted that the future of AI will have significant impact in education and will contribute to the targets of Sustainable Development Goals (SDG4). The application of Artificial intelligence to education (AIEd) has been the subject of academic research for more than 30 years. The field investigates learning wherever it occurs, in traditional classrooms or in workplaces, in order to support formal education as well as lifelong learning. It brings together AI, which is itself interdisciplinary, and the learning sciences (education, psychology, neuroscience, linguistics, sociology, and anthropology) to promote the development of adaptive learning environments and other AIEd tools that are flexible, inclusive, personalised, engaging, and effective. In Applied AI, or 'machine learning', methods such as neural networks are used to train computers to perform tasks without human intervention.

AI in education is going to play a transformative role in augmenting learning outcomes in near future. The role of AI is going to permeate in all the dimensions of education , teaching-learning, evaluation, teacher preparation and professional development, education access, education planning and management and Education administration.

The National Education Technology Forum (NETF) envisaged under National Education Policy (NEP) 2020, is going to play a pivotal role in elevating the Quality of Education and Training by providing the quality tools in AI across educational institutions in the country . To supplement the philosophy of NEP 2020 , Technology Use and Integration & Online and Digital Education, Ensuring Equitable Use of Technology to reach equitable and accessible learning goals , the AI tool is going to prove a game changer.

The emergence of digital learning technologies has come to the rescue during this pandemic, which has suspended face-to-face teaching, among other aspects of our normal life. Education Technology (Ed-tech) is disruptive, for sure, but when combined with the power of AI on e-learning platforms, it escalates it multi-fold.



## Real-time language translations

In a country with 22 scheduled languages and over nineteen thousand dialects, language must not be a barrier to the dissemination of knowledge. Real-time translations powered by AI's Natural Language Processing (NLP) capabilities play a vital role in enabling the sharing of information and expertise in a country as diverse as India.

## Personalised lessons based on aptitude

Based on the student's learning capabilities, each of which requires a tailored pedagogical approach, by deploying powerful ML algorithms, to ensure departure from the homogenous content as well as delivery methods is now achievable, increasing access for Divyang students, and educational planning and management..

## Efficient and regular assessments

AI-based modes of assessment, however, have the comparative advantage of precision over traditional offline methods. Carefully designed worksheets, that are targeted at narrowed topics and micro concepts, can give the students an unlimited practice to work on specific

problem areas. This tool can become a great support for the faculty to be relieved through the mundane job of evaluation, and focus time more on student interaction and learning material development.

## Real-time evaluation

Performance tracking that is not only immediate but also comprehensive gives an explicit picture of the child's progression on the dashboard. This works in contrast to the practice of result declaration at the end of an assessment cycle. Advanced AI-enabled evaluation tools base their marks on multiple metrics, hence, clearly highlighting the strengths and weaknesses of the student's performance , thereby giving chances for course correction.

## Accurate transcriptions for ready notes

Lectures taking place on online platforms have the flexibility of being

recorded and accessed per convenience. These e-lectures can be automatically transcribed into any language, hence providing ready reference notes to students. This tool allows the student to simply bookmark the relevant material , instead of futility of note-taking ; allowing time saving for learning more.

## Automation of non-teaching elements

Faculty are bound to perform administrative tasks such as preparing report cards, marking attendance and maintaining other records, at the cost of their teaching productivity. When summoned, AI can duly take over these extra responsibilities, leaving the teachers to do only what they do best.

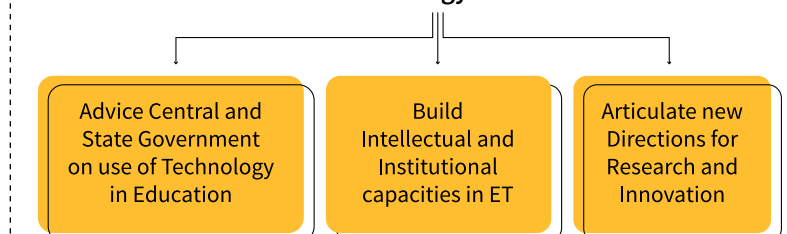
When employed strategically and in unison, all of these various applications of AI in the education sector ultimately create more efficient systems conducive to greater quality learning outcomes.

## Chatbots for ready 24\*7 assistance

AI-powered chatbots act like personal tutors for students, capable of answering common questions and doubts at their disposal. By using NLP, these bots are designed to address the child's queries as and when they arise, leading to better understanding and clarity of concepts.

Bot Libre is one such free open source platform for artificial intelligence, chatbots, live chat, and more.

## NETF National Educational Technology Forum





Skillsets	+	Mindsets	+	Toolsets
AI Tech Skills: Statistical Data, Computer Vision, Natural Language Processing		Understanding the Future of Work. Become disruption ready		Right hardware for access
AI Social Skills: AI Ethics, Security, Privacy, Fairness, Explainability		Discovering the Social Purpose of AI. Deep Understanding of Possibilities & Pitfalls.		Open software
System Thinking & Social Impact Creation		Resilience, Leadership, Team Building & Collaboration		AI-relevant Libraries, Platforms & Frameworks for Inference & Trainings

Program management, partnership and policy support for scalable impact outcomes to build human-centric AI skills

Going forward, Ethical AI in education (AIEd) needs special emphasis to ensure adherence to 10 principles of Ethical AI in education, as under: [https://bit.ly/3kLEv5q]

1. Design systems that encourage and do not demoralize the user.

2. Encourage collaborative learning and the building of healthy human interactions.

3. Support the development of positive character traits.

4. Avoid information overload.

5. Build environments that promote inquisitiveness and curiosity and that encourage students to learn and explore.

6. Consider ergonomic features to avoid injuries such as eyestrain, repetitive strain injuries, back problems, etc.
7. Develop systems that give teachers new and creative roles that might not have been possible before the use of technology. Systems should not attempt to replace the teacher.

8. Respect differences in cultural values; avoid "cultural imperialism".

9. Accommodate diversity and acknowledge that students might have different learning styles and skill levels.

10. Avoid glorifying the use of computer systems thereby diminishing the human role and the human potential for learning and growth.



Reeti Mahobe  
Junior Associate, PADD,  
Quality Council of India

# Gender Diversity and Indian Businesses: A Quest for Equal Futures

In the era where we are witnessing women scaling new heights in multiple fields from making a mark with pathbreaking performance in Olympic games, gaining chance to compete for the prestigious NDA exam and exemplary women leading the companies across various sectors. India also ranks third in the world for women working in senior management positions, according to the Women in Business 2021 report by global accounting and consulting firm Grant Thornton.

Amid such notable milestones, there still exists huge gender divide across different functions and sectors. India ranks at 140 among 156 countries in the

World Economic Forum’s Global Gender Gap Report, 2021. The NSSO PLFS 2019 further reveals that occupational segregation in urban areas is concentrated in feminized sectors such as hospitality which are labour intensive and low growth sectors. However, this sector too remains highly vulnerable with ongoing Covid-19 pandemic. It also needs to be noted herein that female labour force participation rate has declined from 47% in 1987 to 23% in 2017 which is the lowest value till date. According to a report in Harvard Business review, women make up 39% of employment but account for 54% of job losses as of May 2020.

This highlights that we are yet to cover long journey towards achieving gender equality. Gender equity and equality has come up as a





core concern in Indian industry too. It is directly aligned towards India's march on achieving sustainable development goal #5 and also closely inter-linked with all the Sustainable Development Goals undertaking an intersectional approach.

The key guidelines such as newly released Business Responsibility and Sustainability Reporting Guidelines by SEBI (May, 2021) which is placed on the nine principles under National Guidelines on Responsible Business Conduct (2019) by Ministry of Corporate Affairs have put high emphasis on social and gender diversity and making conducive environment for people of all genders, particularly women. This is viewed as an attempt to integrate Environmental, Social and Governance ("ESG") Framework into their core business practices. World Bank 2014 Enterprise Survey places economic case for firms to present workplace gender diversity. The economic benefits of gender parity in the labour market goes

beyond just bringing more women into the workforce, but also on bringing them equitable platform so that their productive potential can be harnessed toward a more sustainable growth trajectory. The economic impact of achieving gender equality in India is estimated to be US\$700 billion of added GDP by 2025, five years ahead of the target year for achievement of SDGs. The IMF has further estimated that equal participation of women in the workforce will increase India's GDP by 27 percent. Further, Sexual Harassment of Women at Workplace (Prevention, Prohibition and

Redressal) Act, 2013 is also a landmark in initiating a more women-friendly environment.

In recent days, companies have also started incorporating portfolio of 'Diversity, Equity and Inclusion' which is a welcome step forward in this pursuit. Application of intersectional approach would additionally ensure opportunities for persons with disability following accessible workplaces approach. Several researches have also established the positive diversity- performance relationship. In this regard, further it needs to be understood that different gender sensitive and gender specific initiatives such as feminine hygiene



facilities, creche facilities, women in decision making roles makes way for innovative thinking and better strategies. Further, there's need that the women who receive vocational training are provided enough job opportunities.

The Labour Code Reforms, 2020 also underline the spirit that promotes gender diversity approach. Occupational Safety, Health and Working Conditions Code, 2020 has the component on making adequate arrangements with regard to women safety. In this context, what would be desirable is to design and undertake harmonization of such

efforts. In this pursuit, the applicability of available guidelines, standards and legislations can be aligned to different industry sectors. This shall in turn enable robust implementation along side monitoring and evaluation for respective sectors.

It is a step in the right direction that concerted efforts are undertaken to take pro-active measures for ensuring gender inclusion in industry sectors such as taking up exercise of gender budgeting, maintaining gender disaggregated data, gender specific and gender sensitive initiatives on hygiene & sanitation, safety and security, child care and ensuring women's role in decision

making. Several studies also suggest that increased investments in areas of women's education, skill development, gender mainstreaming have compounding effect for a more balanced economic growth. This also has a positive effect on human development indicators.

Thus, India and Indian industry sector in particular has golden opportunity to give a further fillip to designing sustainable approaches with an integrated approach. This is further evidenced through a report titled 'Powering the economy with her: Women Entrepreneurship in India (2019), that was published jointly by Google and Bain & Company that women business owners potentially create 150 million-170 million jobs in India by 2030. The current momentum has the potential to shape up a more equitable future in Indian businesses.



**Varsha Misra**  
Deputy Director,  
NABCB, QCI

# Codex Alimentarius



Codex Alimentarius is a collection of international food standards, codes of practice and guidelines to protect the health of consumers and ensure fair practices in the food trade.

The Codex Alimentarius Commission, established by FAO and WHO in the 1960s, is dedicated to protecting health and facilitating trade

The Codex Alimentarius is a collection of international food standards that have been adopted by the Codex Alimentarius Commission. Such standards cover all the main foods and also material used in the further processing of food. Codex provisions concern the hygienic and nutritional; quality of food, including microbiological norms, food additives, pesticides and veterinary drug residues, contaminants, labelling and presentation, and methods of sampling and risk analysis. The Codex Alimentarius can safely claim to be the most important international reference point in matters concerning food quality. Its creation, moreover, has generated food-related scientific research and greatly increase the world community's awareness of the vital issues at stake food quality, safety and public health.

The Codex Alimentarius Commission, established by FAO and WHO in the 1960s, is dedicated to protecting health and facilitating trade

For more than five decades, Codex standards, guidelines and codes of practice have contributed to the safety and quality of the food we eat, the

publication explains. The Codex Alimentarius, or 'food code', forms a global rule book for food safety from production to consumption. Its provisions concern food hygiene, food additives, residues of pesticides and veterinary drugs, contaminants, labelling and presentation, methods of analysis and sampling, and import and export inspection and certification.

Since 1963, thousands of experts from all over the world have built the Codex system of international food standards, bringing us closer to a world where food is safe, of good quality and available in every home.

(codex <http://www.fao.org/3/CA1176EN/ca1176en.pdf>)

Let's Talk about Codex for better understanding so, I have opened session this Q&A which would certainly help to create better understanding not only for Food safety Professional but also for everyone as a consumer. Here we go.....







The mandate of Codex is **to establish international food standards to protect the health of consumer** and to ensure fair practices in the food trade, while

**standards** and 41 hygienic and technological practice codes.

What is Codex GMP?

The Codex **General Principles of Food Hygiene** lay a firm foundation for ensuring food hygiene. ... The application of the General Principles of Food Hygiene and of good manufacturing practices (GMPs) allows the producer to operate within environmental conditions favourable to the production of safe food.

What is the role of the Codex Alimentarius Commission?

The Codex Alimentarius Commission or CAC is **the body responsible for all matters regarding the implementation of the Joint FAO/WHO Food Standards Programme**. Membership of the Commission is open to all Member Nations and Associate Members of FAO and WHO which are interested in international food standards.

Is India a member of Codex Alimentarius Commission?

The CAC is an intergovernmental body, with 189 Codex Members made up of 188 Member Countries and 1 Member Organization (The European Union). **India became the member of Codex Alimentarius in 1964.**

**OOO... I know this may be new to so many of you readers. So do not worry, we will make it more easy in the upcoming series on Codex Alimentarius..**

promoting coordination of food standards work undertaken by international governmental and non-governmental organizations.

Who can be a member of Codex?

A wide range of **international Non-governmental Organizations**, representing consumers, universities and scientists, industry ..., can take part in Codex work and voice their views. Over 160 international Non-governmental Organizations representing [...] What is the role of transparency in Codex?

Are Codex standards mandatory?

Codex texts are **voluntary** and do not have binding effect on national food legislation. ... Codex standards, guidelines and other recommendations may also be used as a reference in case of a food trade dispute.

How many Codex standards are there?

Since it was established in 1962, the Codex Alimentarius Commission has produced sets of standards, guidelines and principles bound into 28 volumes which include **237 food commodity**

What does Codex Alimentarius mean in English?

The Codex Alimentarius, or “Food Code”, is a collection of international standards, guidelines and codes of practice to protect the health of consumers and ensure fair practices in the food trade.

What is food safety Codex?

The Codex Alimentarius, or “Food Code”, is a collection of international standards, guidelines and codes of practice to protect the health of consumers and ensure fair practices in the food trade.

What are Codex guidelines?

The Codex Alimentarius is **a collection of international food standards, guidelines, and codes of practice whose main purpose is to protect the health of consumers** and ensure fair practices in food trade. The Codex Alimentarius thus covers food safety matters (residues, hygiene, additives, contaminants, etc.)

What is the purpose of Codex?

# NABH Quality Connect Learning with NABH - Virtual Trainings



**Vikash Chaudhary**  
Administrative Officer,  
NABH, QCI

Training and capacity building in the realms of patient safety, healthcare quality and accreditation is one of the core activities of NABH. The purpose of these trainings & workshops is to upgrade the knowledge and skills of healthcare personnel, so that they can implement quality principles at their work place.

Keeping the above in view, NABH has designed to provide knowledge to healthcare professionals a suitable backdrop to learn through trainings.

The recent COVID pandemic has given an opportunity to NABH to reach out and connect to many more quality professionals via the virtual platforms at a very nominal cost.

All these Virtual Courses have been updated and enhanced with latest course material and content. All participants also receive a NABH certificate of participation.

Currently, NABH is operating following programs. Details of programs and the training calendar is available at NABH website [www.nabh.co](http://www.nabh.co), online registration facility is also available.

Program on Implementation (POI)

- Hospital Accreditation Standard 5th Edition
- AYUSH Accreditation Standards
- AYUSH Entry Level Certification Standards
- Medical Imaging Services Accreditation Standard 2nd Edition
- Blood Bank Accreditation Standard 3rd Edition
- Nursing Excellence Certification Standard 1st Edition

The objective of these courses is to provide guidance to healthcare providers on implementation of NABH standards. These programs are useful to develop internal capability for working towards implementation of quality and patient safety standards, achieving accreditation and maintaining the same.

The sessions during these programs are taken by Master Trainers, subject experts and Senior Assessors of NABH. Participants get an opportunity to clarify their doubts through interaction with experienced faculty.

Education / Interactive Workshops

- Clinical Audit
- Continual Quality Improvement: Tools & Techniques
- Documentation Requirement for Patient Safety and Quality Improvement
- Good Clinical Practice (GCP)
- New Drugs & Clinical Trials (NDCT)



For more information and registration about above courses please click on link <https://www.nabh.co/EducationTraining.aspx>





## THOUGHTS ON NABH QUALITY CONNECT

I have had the good fortune of being a part of the Quality Connect programme.

Through this initiative of NABH, I have been a faculty for various NABH educational programmes like Workshop on Clinical Audit, Workshop on CQI-Tools & Techniques as well as POIs for the 5th edition. We have been conducting these programmes since over a year now and I think, both, the trainers as well as the trainees, have acclimatized well to this “new normal”.

There are a few pros & cons associated with this new modality of trainings.

First and foremost, the vital “personal touch” has been dispensed with. The “visual feedback” that a trainer looks for; and is a very vital ingredient; is per force missing in these virtual sessions. It helps a trainer comprehend if he has been successful in getting his point across.

An advantage has been the relative ease with which we are able to reach out to all corners of the country and the vastly increased base across which newer knowledge can be propagated. This is a definite boon. Of course, this also has a few negative connotations. Mainly, A few of the candidates attending these sessions are either not really interested in the subject; or they have more important things to attend to; and hence, are unable to pay undivided attention to and comprehend the matter under discussion. Only genuinely interested persons would attend the in-person sessions.

Last, but not the least, there is a definite loss of interactiveness due to limited bandwidth as well as limited time at our disposal.

I hope and pray that we are soon able to resume the hugely enjoyable, interactive and informative sessions in-person.

**Dr. Sudhir Sharma**

Director-Department of Surgery, Fortis Hospital, Noida

Quality Connect is a great initiative and helps in improving the perception of NABH to the public.

The biggest strength is that it is a programme from NABH itself and therefore, considered authentic and reliable and is reputed.

The faculty has tremendous experience, knowledge of the standards and also the expectations not just in assessment but also implementation.

The duration, timing, and scheduling over the weekend enables wide spread participation from different categories of individuals.

The on-line platform is extremely cost-effective and convenient for participants and NABH.

It is extremely useful to those who are into the system of implementation and wish to revisit the standards for refreshing knowledge.

**Dr. Monica Gupta**

Chairman of Quality Improvement  
Head of Laboratory Services & Blood Bank, Professor in  
Pathology  
Pramukhswami Medical College & Shree Krishna Hospital,  
HM Patel Centre for Medical Care & Education

At a time when everyone was flummoxed as to how things at NABH could move ahead with the pandemic choking every activity, the efforts of the CEO, Dr Atul Mohan Kochhar through unique initiatives such as virtual assessments and Quality Connect have shown the light of the day and have reaped huge dividends. My experience with virtual training sessions has been excellent. The MS Teams platform is user friendly and seamless, and the coordination and support by NABH secretariat members has been phenomenal. We have consistently been able to educate the attendees on various topics, at their ease and ensuring their safety. In fact, the virtual sessions have been so successful, that it makes one ponder whether we can continue this new norm even after the pandemic is over. The only thing that is missed is the non-verbal communication between speaker and audience, the face to face interactive sessions and the “May I ask you a doubt?” interactions during the tea break...but as they say, “you can’t have the cake and eat it too”; NABH virtual trainings started at a time when other organizations were struggling to find a way. The virtual trainings have been extremely useful to maintain the continuity of trainings... something which NABH would always want, that the torch of knowledge continues to burn without a break.

**Dr Prashant Kelkar**

Dy CMO(Pediatrics), JNPT Hospital, Navi Mumbai  
Principal Assessor & faculty, NABH

Virtual and traditional learning both have their advantages and disadvantages. However, one thing is for sure: COVID 19 taught us that virtual education is here to stay, and its demand is on the rise. I believe the Virtual POI program emphasizes learner-centered activity and system interactivity therefore an adult responsible remote learner can outperform traditional classroom participants.

It also provides an opportunity for the faculty to learn and redesign and to improve the delivery of their classes by each program delivered. There are endless possibilities for leveraging core competency through enhancing knowledge and learning resources. Virtual POI helps in flexibility, cost, methods of learning, timelines, and re-usability of e- contents content to train their employees. It also helps to reach many participants who use to miss their opportunities because of leave and travel. However virtual POI demands self-motivation among students to participate and learn.

**Dr. Christopher Sudhakar**

Professor and Director Quality, Manipal University

Feedback received from participant about trainings on virtual platform

Thank you for all Great courses I have attended POI., and Documentation Requirement for Patient Safety training, great presentation style with lots of opportunities to ask questions and talk about practical examples which all made for a really enjoyable and informative course.

"This has more than met my expectations."

"A wonderfully practical course - both personally and professionally. I will take away lots of things that I can quickly and easily apply."

I heartily thanks to NABH for guiding me.

**Dr Amita Swami**

BDS, MHA, Participants in NABH Trainings







**MEMBERS/  
GUESTS  
WRITE**



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**Anshuman Tiwari**  
*Director, Deliver Excellence*

## The Quality Profession needs introspection

### TIME TO BEING A QUALITIST

Can one be an expert in Quality? And would it matter in the future if I had a glorious (as the announcer introduced me, not my opinion) past in Quality Management?

**Both questions have a short answer-No.**

### Forget your past

I also recall that I addressed the conference attendees by requesting them to forget their past achievement, especially in quality management. Why? Because, today it does not matter where we came from. We as a profession are at the crossroads.

My appeal to all quality professionals, please forget your past. The present is completely different from the past and by hanging on to the past we are making our lives tougher to live. The future will be completely different from the present. What got you here, won't get you to a better future. Not necessarily, I mean. I have long forgotten what quality meant 20, 25, 15, 10 years ago. Forgotten in the sense that I don't brood upon it.

It is obviously important to know where you come from. It is obviously very important to know what lessons you draw from the past. What is foolish is to believe that these lessons will apply today as well. A case in point is our fascination with the classical approach to Six Sigma. Many of us cling to the glorious memories of Six Sigma in times when Automation and Analytics are centerstage. Instead of working on trying to apply Lean and Six Sigma to Automation, many of us lamenting its demise. I interview a lot of people and often come across some whose only grief in life is that nobody wants to do a hundred-day Six Sigma project today. Can we move on and solve business problems and not our problems?

**If we look around, we will find the people successful in Quality today have embraced the newer fields of Automation and Analytics.**

### Your 99.99% is 0% for the customer who got poor quality

I look at quality from a customer point of view. For example when we aim for 99.99%, what we forget is that the one customer who did not get what he or she was supposed to get, the failure rate is a 100%. Our quality rate doesn't really matter to that one customer who did not get what he or she ordered. And for me this will not change. Customers will want 100% adherence to what was ordered.

I am also often asked about my views on Quality 4.0. And my reply is, it does not matter. If we all hang around in the profession, there will be a Quality 6.0 also. If we don't change the foundations and fundamentals of what we are doing as a profession, we will probably not be around as a profession for too long.

### Poor quality of quality professionals

Not enough is being done to attract good talent to Quality. Many people join quality field for work-life balance. Like every other field, only the people who are passionate, knowledgeable impact oriented are interested in doing something will succeed in quality. Quality is hard work. Every function is hard work. And your need for good work life balance is the last criteria in my list when I am considering to hire you.

### The learning gap

99% of people are trying to learn what worked for the 1%. Nothing wrong with that but it is important to understand the journey and the process and not just the outcome. Most success stories and leadership books only glorify the hero. But we are not that hero. We need to learn the process and not the outcome. What worked for Steve Jobs is not going to work for you unless you have the ingredients and work as hard as he did.

Now, I am not saying this to discredit the whole concept of learning from success stories. I truly believe we can learn. It is just important to know what to learn. And even without the hero worship, we still have to do a good job in our current role.

I believe in the concept of getting better, everyday. Today's quality better than yesterday. Tomorrow's quality better than today.

### Qualitist - A name for our profession

Dr J M Juran, one of the founding fathers of modern quality management coined the term Qualitist to describe our profession. In India, Suresh Lulla has embodied and championed this term. We all need to give a name to our profession to elevate it to a mainstream profession.

We don't yet have a name. Therefore, it is time that bodies like QCI and other national and international bodies adopt the term Qualitist.





**Saurabh Jain**

Managing Director  
Vidya Prakashan Mandir (P) Ltd.

## Efficacy of Online Learning Explored

### A MASTER CLASS FOR THE UNINITIATED TEACHER

Today, like never before, educators the world over are faced with an increasing pressure of transforming themselves into e-teachers, and that too with success. While the world fights an unprecedented pandemic with a forced lockdown, digital education seems the only answer to compensate for the loss of school time. If you are an uninitiated teacher, read on to know more about the nuances of this change.

“Change will always meet resistance- Students who don’t want to study at home; teachers who are not trained to teach online; parents who feel stressed with the lock down challenge... Yet, we need to understand that more than the loss of academics; it is the need of the hour to secure a child’s mindset by keeping him/her engaged. Only a teacher can achieve that.”

E-Learning refers to the learning that takes place via electronic gadgets such as smart phones or computers. Learning material may be available offline, such as in the form of educational CDs or online such as educational websites or YouTube videos.

E-Learning is a powerful tool and its advantages are many. Learners are able to learn in the comfort of their home. They can choose their own time and space. Most importantly, they can learn at their own pace. Different types of learners get access to different media to achieve the same learning outcome. A visual learner can choose videos and animation to learn. An auditory learner can plug earphones and listen to audios. A kinesthetic learner would look at associated activities and worksheets. This means that the E-Learning platform can override our limitations of time constraints and skills as an educator.

Not only for the learners, the advantages for teachers are also many. Once you go through the task of creating your repository of resources, it remains with you forever. Every year, the same digital material can be used. You may only need to revise after feedback from the previous sessions. In this way, instead of focusing upon transactional methodologies (which you would have already done while creating your repository) you can personally lead and interact with each student on his or her journey. This, I believe, is the highest achievement for a teacher especially in a vastly populated country like ours. Online assessments and evaluation tools remove the burden from a teacher’s shoulder to a great extent. Tools like test generators and MCQ Maker not only allow teachers to quickly formulate assignments, they also enable instant

checking of answers.

Akin to every Teaching/Learning paradigm, E-Learning poses its own set of challenges which educators must address. The first challenge for teachers is to become well-versed with the technology that is needed to impart online education. Teachers must remember that we have seamlessly adopted newer technologies such as using our smart phones, working with emails, downloading YouTube videos in our daily lives. In the same way, with a little initiation mastering E-Learning tools is neither impossible nor difficult.

Teachers must understand that during the process of E-Learning, the pace and the completion of a learning module becomes learner-centric. Self discipline and self-motivation of the learner becomes the most important ingredient in the achievement of our objectives. You can deliberate a non-performer to sit through your class in school and listen to what you say or do, but this would need a different approach online. Another common problem that educators will face is to accept the authenticity of online submissions for assessment and evaluation. Newer methods and online tools are enabling us to combat this situation.

Teachers thrown with the challenge of this dilemma can find higher meaning with the knowledge that E-Learning is here to stay and that they are moulding students who will definitely need to graduate or get certified from online learning in the future.. In the next article, I will be initiating you into the nuances of online tools that you can easily master and get started. This is indeed a new world order in School Education. The baton is in your hands, dear teachers.

**Happy Learning!**





**Amit Das***ICFAI University, Dehradun*

## The Artificial Intelligence (AI) & Quality Control

The Artificial Intelligence is considered as the next revolution for the world. From banking to agriculture, from bio-medical engineering to Nano-technology, AI is providing a new wave of development. Globally it is considered that the size of AI based economy would be 116.4 Billion US Dollar by the year 2025.

The deployment of AI through the various innovative approach improving the quality of life by the deep impact of intelligence. Industries are dynamically integrating artificial intelligence technology with across operations and automation. The encapsulation of intelligent technologies are upgrading exponentially the quality of the product. Few areas are remain untouched by the AI technology. AI is dramatically changing entire manufacturing and processing cycle of the industry. The major benefit from the AI is "Quality-Control" and its deployment. AI technologies have the big potential to gain best quality of products through image processing, artificial-neural-network (ANN) and machine learning.

The use of smart and intelligent cameras with AI-enabled software supporting manufacturers to touch the good quality of inspection of products. Sometimes, some quality inspections could be beyond the capability of human brains. The incorporation of AI with manufacturing industry could help to perform sophisticated observation of products with an extensive machine intelligence for the best quality of products. The traditional manufacturing processes and inspection activities are redefined by the use of advance machine vision technologies with the less probability of low-quality of product. The AI technologies are converted manufacturing industry from automated to intelligent approach with

the capability of deep learning. In present scenario the AI enabled manufacturing plants are proficient towards the autonomous system with the input of expert system.

The intelligent machines are improving the likelihood of best quality of products with deep perfection. Learning algorithms are making the entire process more productive and qualitative. The business leaders are merging the AI with planning and automation with the production context to take lead movement in 4th industrial revolution. The emerging AI technologies has ample number of benefits with some downsides. Intersection of industrial information system with AI is providing more directions to planning and resource management.

Due to digital socio-ecosystem, modern customers are digitally more intelligent with vast global knowledge and expecting better deliveries from industries. The induction of AI in Quality Control is revolution in today's world with innovative machine learning and deep learning algorithms. The Machine Learning algorithms are assisting to industries to catch the greater standards. It is maximizing the customer's satisfaction within the restricted cost.

The production plants generate high volume data from different phases of production. The data generated from requirement analysis, design phase,

production phase, testing phase and quality control phase. The data collected from different phases are encapsulated with adequate number hidden information. By using the data science available raw data explored and correlated. This provides structured report of entire process with the complete pattern analysis. The use of Big-data is providing better crystal report for the better quality of products.

The Machine learning algorithm helps systems to learn from the available data, identifies the hidden patterns and take decisions with minimum human interventions. It extracts useful insights from available real-time data for the Quality-Control-Engineers, which helps to produce the best quality of products. The AI-enabled production platforms enabled with knowledge, which accumulated from the day-to-day processes by the system. This accumulated knowledge utilised by the system to understand the gaps during the production process. The gap-analysis provides the better quality of products to customers. The use of AI during production reduces the test case cost because the occurred risk could be easily identified by the different machine learning techniques. It helps to trace the entire risk in predictive approach. The engineers could easily identify the weak area of production line, which could not be marked by the human eyes with the high rate of customer satisfaction.





**V Umesh Naidu**

*TQM, Improvement Initiator, Lead Auditor  
(ISO 9000), Green Belt - Six Sigma*

## Drones

### The Wonder Flying Machines

It is an Unmanned Aerial Vehicle (UAV) able to fly without a pilot on board. The unpiloted aircraft is remotely controlled by radio waves with a ground-based controller and communication system with the craft. They fly autonomously through software-controlled flight plans embedded in its systems working in conjunction with onboard sensors and global positioning systems (GPS)

**In recent times, these are making headline news. Let's take a peek on these amazing objects**

### Drone and a Helicopter

The difference between drone and helicopter is, the former can fly independently whilst later needs pilot for directions

### Drone's historical timeline

There are several claims and counter claims on who when and where the first amazing flying object was put up on air. For the limited scope of this article, it however, suffice to know that it dates back to 1783 when the first unmanned aircraft was used as a hot-air balloon in France. Whilst some argue, Austrians used them first in August 1849

### How Drone got its name

In 1935, the British produced a radio-controlled aircraft for aerial target training practice. It is believed around this time, the term 'drone' started to be used as a verb to mean as a low humming sound that goes on a continuous basis 'sounding like buzz' reminiscent to a bee's persistent hum. In 1936, inspired by the first returnable and reusable UAV model, Lieutenant Commander Delmar

S. Fahrney of U.S. Navy formally referred UAVs as 'drones' as a homage to the Queen Bee

### Inventor of modern Drone

Abraham Karem was a pioneer and regarded as founding father of UAV technology. His innate passion for aeronautics since childhood saw him graduating into an aeronautical engineer. In 1973 he built his first drone for Israeli Air Force during October's Israeli-Arab War. Later in 70s, he migrated to United States, there he founded Leading Systems Inc. to manufacture sophisticated drones. They eventually turned out as famous Predator drones that gave him the title as "Drone Father"

### When was Drone first used in India

India operated its first drone in 1996 when the Army acquired an Israeli Searcher Mark I.2. Later in less than two years, Indian Air Force and Indian Navy followed suit.

### Drone's construction

It is composed of two major systems :

1. Movement system
2. Control system

#### Movement system

##### Frame

Basic element of a drone is the frame, which should be much lighter. Frame classified based in its construction and number of arms used. Generally it is recognized that more the arms, allows for a more stable flight. Depending on number of arms and motors used, drones are categorized into :

**Bicopters** – two engines

**Tricopters** – three engines

**Quadrocopters** – four engines

**Hexacopters** – six engines

**Octocopters** – eight engines

#### Rotors and engine

They constitute drone's main propulsion system and can carry highest payloads. For vertical motion, drone rely on its rotors which consist of a motor to hover and climb. With increase in speed, rotors produce an upward force to provide lift for the vehicle, and descend when speed decrease. By varying the speed of propellers, it allows the drone to hover, ascend, descend, or affect its yaw, pitch and roll

#### Power of a drone

From the time a drone flies, it is power by batteries. As a result, they get exhausted quickly causing the craft to return to the ground early

#### Control system

#### Electronic control & communication system

The Flight Controller plays an important role in drone's flying mechanism. The device controls every movement of drone, ranging from its launch, navigation and landing. Its major task is to communicate properly thru radio waves/ signals between a remote and drone. The onboard sensors help drone to make right decisions about its altitude, direction and other tactical movements and during decent







Connectivity

Besides transmitter, drones can also be remotely controlled by a smartphone or tablet. Most drones work on 2.4 GHz frequency range and flight controls take help from Wi-Fi networks to make right decisions. Many features of a smartphone and drone are same as both have GPS, Wi-Fi and many other common sensor units

Accelerometer & Altimeter

Accelerometer feeds drone with commands for its speed and direction, while an altimeter directs the machine about its altitude

Cameras

Drones are versatile pieces of equipment that harness the power of wireless technology to do everything from taking video shots to assist in emergencies. Some drones have built-in cameras onboard that help users to see difficult-

to-reach locations and are game changers in search-and-rescue missions

The intricate engineering that go into drone building and its ultra-responsive nature will further be heightened with 5G services that would allow professional players to race the drones even thru high speed obstacles at ease

How Drones fly

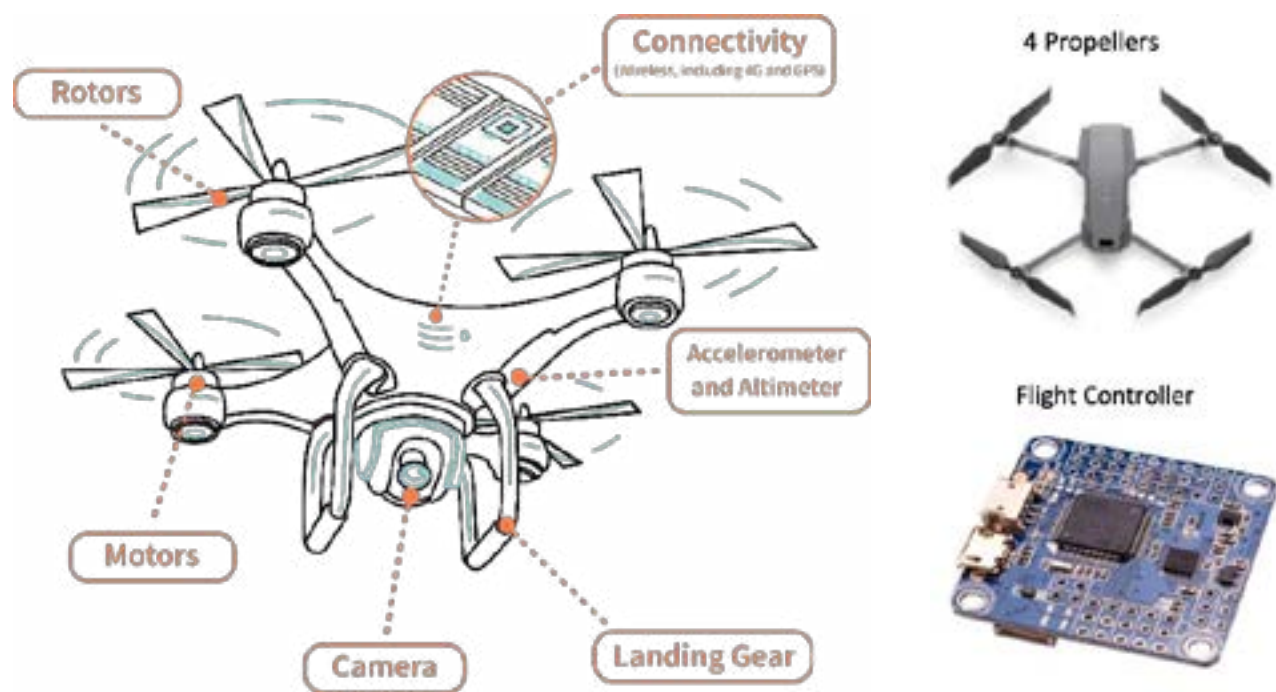
Drone is a combination of a little wireless technology and a whole lot of physics ! A complex application, inside the device is packed with a specially designed multi propeller system that makes the vehicle highly independent. If any motor inside the device stop working, the vehicle will still keep flying as it will get support from other propellers working in group as a unit

Unmanned vehicles are like a flying robot controlled from a remote unit to manage the craft on air by an intelligent software program. When flying, drones use :

Flight Controller which are its “brains”. It consists onboard working sensors like GPS, obstacle avoidance sensors and other components etc. to properly assist in their flight. On receiving information from a remote controller, signals are sent to the motors to respond to the commands it is fed with

Rotors consist of a propeller attached to a motor to hover. To lift the craft, remote controller increase its speed until rotors produce an upward force that is greater than gravitational pull. Likewise to descend, the controller drops its speed

When a drone flies, the motors spin the propellers to push the air molecules downwards so as to move the drone upwards. Once drone is flying, it is able to move forward, back, left, and right by spinning the propellers at varying speeds



Drone swarms

Drone swarm means, multiple drones used at once to communicate, collaborate and make collective decisions on where to go and what to do. They exchange data and work as a single unit, navigate and maintain distance to avoid collisions. A key advantage is that one operator controls many drones and can cover a wide area with many targets

Can Drone carry weapons

An unmanned combat aerial vehicle (UCAV), also known battlefield UAV, carries aircraft type ordnance like missiles, anti-tank guided missiles and bombs for strikes, unlike unmanned surveillance and reconnaissance aerial vehicles

Sizes : Based on their weight :

SN	Type	Weight
1	Nano	< 250 gm
2	Micro	250 gm – 2 kg
3	Mini	2 kg – 25 kg
4	Small	25 kg – 150 kg
5	Large	150 kg >

Category : Based on their altitude and range :

SN	Type	Altitude	Range
1	Hand-held	2000 ft / 600 m	2 km
2	Close range	5000 ft / 1500 m	10 km
3	NATO type	10000 ft / 3000 m	50 km
4	Tactical	18000 ft / 5500 m	160 km
5	MALE (Medium Altitude, Long Endurance)	30000 ft / 9000 m	200 km
6	HALE (High Altitude, Long Endurance)	30000 ft / 9100 m	Indefinite range
7	Hypersonic (High Speed Super Sonic)	50000 ft / 15200 m	> 200 km





## Uses

It is an intelligent unit that can cover large areas to bring out hidden information like a spy. It is therefore popular in military applications, as it carries out an impressive range of tasks without putting a pilot's life at risk. They are used for intelligence, surveillance, reconnaissance, target, decoy, air strikes, bomb detection, hostage negotiation etc.. Used also to patrol national borders, for purposes of internal security, research & development, logistics, fire brigade, assist farmers, survey infrastructure, geo mapping, inspections, monitor penguins in far down Antarctica, media coverage to report from inaccessible locations, provide relief assistance during natural disasters, perform critical search-and-rescue missions, in advertising businesses, film industry, package deliveries and many more

With drones, there is always a better way to do things.... one that is more safe and takes less time

## Indian Regulations

The regulatory bodies overseeing drone matters, such as UAVs procurement, operations and compliance requirements are :

- a. Director General of Foreign Trade (DGFT)
- b. Director General of Civil Aviation (DGCA)

- c. Civil Aviation Requirements (CAR)
- d. Bureau of Civil Aviation Security (BCAS)
- e. Wireless Planning Commission (WPC)

## Rules & Guidelines

Readers will be well advised to refer Ministry of Civil Aviation, GoI notification on "The Unmanned Aircraft Systems (UAS) Rules, 2021" dated 15th March, 2021. There are interesting terms with dos & don'ts for strict adherence, like :

- a. Geo Fencing
- b. Drone Swarms
- c. Prototype Unmanned Aircraft System
- d. Categorisation of UAS
- e. Subsequent categorization of UAS
- f. Eligibility
- g. Security Clearance
- h. Procedure for Authorisation for a UAS importer, manufacturer, trader, owner or operator
- i. Validity of Authorisation
- j. Manufacture and import of prototype UAS
- k. Certificate of manufacture and airworthiness of UAS
- l. Import of UAS
- m. Safety Oversight Mechanism
- n. Manufacture and import of same type and class of UAS
- o. Technical Requirements
- p. Approvals
- q. Test Flights

- r. Maintenance Centres
- s. Conditions
- t. Unique Identification Certificate

- u. Transfer of UAS
- v. Operator
- w. Flying Restrictions
- x. Student Remote Pilot License
- y. Remote Pilot License
- z. Remote Pilot Instructor

- aa. Authorised Training Organisation
- bb. Permission for Flight
- cc. No Operation Areas
- dd. Unmanned Aircraft System Traffic Management (UTM) license
- ee. Authorisation and Eligibility
- ff. Authorisation for R&D Organisation
- gg. Insurance
- hh. Authorisations and Permits to be obtained under the Rules
- ii. Restrictions and Cancellations on License, Permits, etc
- jj. Exemptions
- kk. Fee for various services
- ll. Penalties
- mm. Compounding of offence

## Going forward

With advancing technology, many drone variants will be available for military applications as well for big enterprises. As per recent update, Google and Amazon are developing their own drones to deliver parcels to long distances by air, whilst Facebook is contemplating to develop giant drones to carry signals to remote locations for direct internet access.



**Manoj Belgaonkar**

*Head – Regulations, Standards and QM, Siemens Limited*

## Understanding Quality 4.0

Quality 4.0 - The application of digital technologies to productive systems to gain the profound knowledge of their operations so they may be optimized for performance in real time.

- Dr. Greg Watson

### Content source

1. My notes on Wireless Communications Management Systems & Compliances (for hand-held, vehicle mounted & fixed stations for voice and data communications) during my stint with a steel major
2. Rules & Guidelines on procurement, operation, maintenance and compliances viz.
  - \*Drone Rules, 2021 – Ministry of Civil Aviation
  - \*Guidelines - Director General of Foreign Trade, Ministry of Commerce & Industry
  - \*Rules - Wireless Planning Commission, Department of Telecommunication, Ministry of Communications
1. Literatures on Google including a paper on "Drones & India" by Mr R Swaminathan in 2015
2. As an amateur, my experiences to assemble and fly a palm sized drone I test flown it on 16th October, 2016





Currently we are in the middle of 4th industrial revolution and different facets of the same are explained in Fig. 1.0

Fig. 1.0 – Different Facets of 4th Industrial revolutions

- Integration of new production technologies e.g., additive manufacturing, 3D printing, robotics, COBOTs
- Digitalisation of brownfield setups to overcome limitations due to existing technologies or to sweat existing assets by addressing specific challenges e.g. rejections, resource efficiency
- Deployment of enabling technologies to analyze data gathered in real time to facilitate online / decentralized decision making e.g. AI, machine learning; to train online e.g. augmented reality
- Analyse field data to optimize the resource deployment, integrate sustainability e.g. Big data. Predictive maintenance, OEE, digital twin
- Vertical integration thru appropriate interfaces / protocols e.g. OPC UA, Horizontal integration over eco system e.g. block chain, engineering data quality, logistics
- Manage risks to digital transformation e.g. Holistic Cybersecurity

Following article is about, how one can begin his / her transformation journey from current quality practices (termed as Quality 3.0), by better understanding of the underlying principles that characterize Quality 4.0.

Customer impact and Business Focus:

**Quality 3.0** - The primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations. To realise this, organisations engage across their supply chain: internal / external customers or inbound / out bound supply chain. The extent to which this has been fulfilled, is usually measured through customer satisfaction.

**Quality 4.0** – Oragnisations have to work towards enhancing customer experience. During which their pursuit is to enhance goodness / reduce the bad experience over every touch point. Also, the context extends to stakeholders, platforms, eco systems.

**Environments including stakeholders are included in their context. Business aspirations are based on customer impact and is the basis for managing quality.**

Personal commitment to Quality

**Quality 3.0** – This is about Standardised products, processes, services. Quality is more at abstract level.

**Quality 4.0** – This is about Personalisation – hyper customization. Quality is more specific

**Product quality** – actual entities

**Service quality** – actual experiences

**Process quality** – actual activities

To realise this, leadership clearly sets the tone from top and actively promotes quality. Everybody is responsible for Quality; it is part of every role / job profile.

Check and Test early to Learn fast

**Quality 3.0** is based on Product Lifecycle management: waterfall approach – formal, inflexible, long duration which is more suitable for hardware products

**Quality 4.0** - Failures, mistakes are discussed openly to improve systems. Influence of Quality extends to include digital value addition as well. It needs to use agile methods of value addition.

Processes are planned, implemented, studied and realigned to enable achievement of performance as well as managing risks

Real time data and openness

**Quality 3.0** – Focus is on Quality assurance, Quality Control, measuring results at the end of processes / lag indicators. Process of Quality related data collection is manual, batch orientation and that too from limited parameters. Resulting in delayed analysis by cross functional teams, costlier corrective actions.

**Quality 4.0** – Data collection is sensor driven, granular, real time. Q Dashboards enable better visual representation of trends. This necessitates, more frequent and on the spot, decision making based on empowerment to shop floor teams.

**Insights derived from analysis of real time data are the basis for improvements, decision making by empowered front line operators**

Preventive, Risk management & Systematic Improvement

**Quality 3.0** – is based on misinterpreted Schewart cycle: Plan – Do – Check – Act. Most time is spent in Do and Check. During which focus is on the –

conformance, compliance.

**Quality 4.0** is more focused on enhancing goodness by planning of quality, Primary focus during 1st iteration is on study of - What happened “As per plan”, In the next iteration focus is on standardization, to eliminate badness / undesired consequences of process variances, detection of What did not happen (non conformance).

**Preventive elements are integrated within processes to deliver sustainable customer satisfaction and business performance. Non conformances are tracked and controlled**

Quality competence for everybody

**Quality 3.0** – Highly QA / QC oriented. Due to highly manual data collection, analysis is limited to the dominant contributor to variation. Typical quality tools used are root cause analysis, application of 8D, Fishbone, etc.

**Quality 4.0** - Since, data collection is thru sensors, more granular, so one can deploy multi-variate analysis. This means quality teams needs to acquire new skills such as statistical proficiency, use of mind maps for Problem solving. Data analytics allows deeper understanding of the parameters, unknown correlations leading creation of new knowledge. These insights than can be protected as intellectual property, allows one to plan quality. Newer methods of quality assurance in terms of Remote

inspections, Virtual audits needs to be implemented.

**Decision making based on based on quality insights derived by integration of real time data and data analytics. This calls for role specific integration of quality aspects / tools.**

Quality Manager is valued as business member

**Quality 3.0** – Still Quality is considered as shop floor focused, process driven to manage of status –quo, largely supporting execution of business strategies,

**Quality 4.0** – QM is involved in the planning of products, processes, projects at both in-house and external providers. New age quality is about making sense of data specially to manage resilience and is technology / push driven with systems orientation.

**QM is guardian of monitoring and managing of stakeholder needs & expectations. QM enables organisations in their engagement with stakeholders, based on technology to provide transparency, gain their trust.**





**Dr Harveen Kaur***Environment & Sustainability Consultant*

## How to Recalibrate Pedagogy during COVID-19 Setback?

### A GUIDE TO PREPAREDNESS FOR LEARNING IN SCHOOLS POST-LOCKDOWN

The unprecedented impacts of lockdown are not only limited to academic institutions but teachers and students as well.

It has been reported by The United Nations International Children's Emergency Fund (UNICEF) that around 1.3 billion learners have not been able to attend schools or universities, and this number is growing day by day. However, in an endeavour to minimize the impact of lockdown induced disruptions without compromising the safety of students for Covid-19, teachers are facilitating academic and learning activities of students (be it classroom teaching, participation in quizzes and other activities) in their best capacity. The lockdown has presented a very good opportunity for academic institutions to not only use tech-savvy teaching methods but also to interactively engage students to perform scholarly exercises in the virtual world. Now almost all academic institutions like schools, colleges and coaching centres are adapting to an alternative pedagogy to engage students remotely to continue the teaching and learning process.

### New Pedagogy Shift

The lockdown-induced pedagogics has challenged the contours of old-style teaching and learning methods. Undoubtedly, in the crisis scenario, educators don't have the luxury of imparting an "ideal" teaching environment. Pandemic pedagogy has stressed on flexibility, leading a "virtual reality" of school rooms without negotiating excellence. Different technical solutions adopted by the teachers include Zoom, Google classroom, Webex and Skype. These platforms have helped teachers and students to interact together in a virtual environment. Hence, digital learning is booming incredibly. It focuses on generating an e-learning model promoting digital classrooms for today and near-future where one teaches thousands, to overcome the problems like shortage of books, schools, good teachers. In nutshell, it says that one must "rise from the physical classroom and promote digital classrooms".

### Precautionary Measures for Post Lockdown Pedagogy

As of now we have to live with Covid-19 and we cannot afford to comprise on "real teaching-learning environment" we would have to adapt with certain measures which can promote learning in schools but with extra precautions. Precautions are necessary to prevent the potential spread of Covid-19 in school settings. Some of the suggested measures include:

- **One seat per student** with 6 feet distance between two students.
- **Rotational classes for students;** dividing the number of students into two batches and conducting classes in two shifts to ensure that all students don't have to come at the same time.
- **Reducing school timings** to avoid students and teachers staying long.

## The New Normal in Education Sector

As of now we have to live with Covid-19 and we cannot afford to comprise on "real teaching-learning environment"

Paradigm shift in teaching technology required

New teaching software's, platforms and apps can engage students.



We would have to adapt with certain measures which can promote learning in schools but with extra precautions.

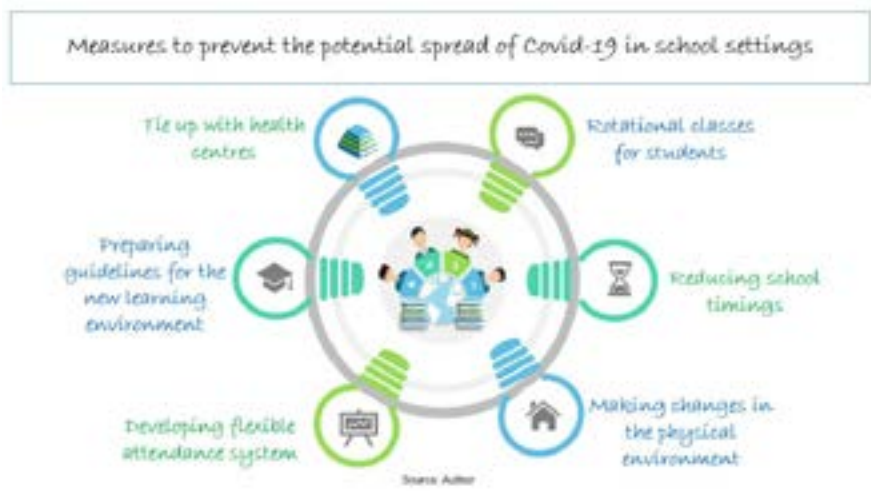
Precautionary guidelines for educational institutions required

All stakeholders views and collaborations are important.

Source: Author







- **Allowing extra rest** to teachers and students to promote good mental and physical health
- **Making changes in the physical environment** such as regular sanitisation of the school campus, regular sanitisation of seats, school gate, washrooms, playgrounds and frequently touched surfaces etc.
- **Avoiding morning assemblies** and gathering. Rather an online assembly in classrooms can be conducted.
- **Performing temperature checks** of staff, teachers and students in the morning and afternoon.
- **Avoiding parent teaching meetings** and outside visitors to come in schools
- **Preparing guidelines for the new learning environment** and sharing them with teachers and parents to get back the trust of being a safe campus
- **Training school staff and employees** on social distancing will offer scope for more sanitation
- **Tie up with health centres** and preparedness of medical facilities in the medical room will be helpful.
- **Not allowing sick students to attend school.** Students, teachers and other staff with symptoms related to Covid should not come to school.
- **Developing flexible attendance system** and sick leave policies that encourage students and staff to stay home when sick or when caring for sick family members.
- **Advance planning of possible academic calendar changes,** particularly concerning breaks and exams.
- **Age-specific health education** to students is must (pre-primary, primary, lower secondary and upper secondary).

## Conclusion

While the damage to the sector is similar to the damage every sector across the world is facing, it is possible that with some careful planning, we might be able to limit the long-term consequences of this prolonged lockdown. As per World Health Organisation (WHO) education can encourage students to become advocates for disease prevention and control at home, in school, and in their community by talking to others about how to prevent the spread of viruses. Maintaining safe school operations or reopening schools after a closure requires many considerations but, if done well, can promote public health. Adhering to “Interim Guidance for Covid-19 Prevention and Control in Schools” prepared by WHO can be useful for the spread of Covid-19.

Post-pandemic, a shift in mindset will be needed — to teach and learn. Today, even after a month of announcements and extensions, it is difficult to predict when schools will restart. Going forward, in the new post-pandemic environment, what will be required is a huge shift in mindset — both social and emotional. A new approach is needed to teach in this altered online paradigm.

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### Mechanical Data

Bleed Size : 21.6 cms x 29.4 cms  
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### Other Informations

Language : English  
Frequency : Quarterly

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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:  
**Ms. Kokila Gaur / Mr. Kushal Kanwar**

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*Quality Council of India  
invites application for the*

# 3<sup>rd</sup> QCI-QUALITY CHAMPION AWARD-2021



Quality Champion Award aims to honor outstanding individuals {Indian nationals including NRI (holding indian passport) and OCI card holders} who have demonstrated/ contributed significantly towards the Quantum improvement in Quality. This may include the following but not limited to:

1. Technological Innovations
2. Significant improvement in the quality of processes, product and services.
3. Out-of-the-box initiatives taken to become best in the class, that may be benchmarked

All quality professionals who have facilitated a quality journey and have achieved some or all of the aspects below are encouraged to apply:

- a) Benefited self, organization and society
- b) Obtained patents

- c) Received recognitions-Awards/rewards and stakeholder's appreciation within and outside the organization
- d) Released quality related publications and articles in prestigious journals
- e) sustained the growth of organization as evident from the business results

#### **Levels of Award:**

PLATINUM | DIAMOND | GOLD

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