CELEBRATING 25TH ANNIVERSARY

Quality is always the result of high intention, sincere effort, intelligent direction and skillful execution

QUALITY INDIA

October - December, 2021

QUALITY COUNCIL® OF INDIA
Creating an Ecosystem for Quality

CELEBRATING 25TH ANNIVERSARY

Dr Ravi P. Singh
Secretary General
Quality Council of India

Dear Friends

On January 21, 2022, QCI will celebrate its 25th anniversary. For the last two and a half decades, all of us, who have been a part of this family, have been steadfast in our commitment to improve the quality of life of India's 1.4 billion citizens. I feel great pride and gratitude as we approach this milestone, and I would like to thank everyone who has been a part of this journey for doing their bit to help QCI persevere in its mission to serve as an agent for change, innovation and nation building.

During this quarter, we have made great strides forward on existing projects, as well as taken on some new, challenging assignments. The Open Digital Commerce Network (ONDC) is one of several next-generation, population-scale tech initiatives that QCI has been incubating. The first-of-its-kind, market-driven network, ONDC has been conceived with the aim of democratizing Indian e-commerce. To accelerate adoption, and promote product familiarity/understanding, QCI will host the first ONDC Grand Hackathon from January 7th – 9th 2022 for Startup India, in collaboration with Protean e-Gov and Beckn Foundation. Rooted in the twin, parallel tracks of integration and innovation, the Grand Hackathon will serve as a primer for the Indian private sector on what ONDC is and what it stands for.

One of our projects, 'Atal Bhujal Yojana', aims at Sustainable Groundwater Management through Community Participation, Demand-side Interventions, and Convergence of ongoing Central and State Water Schemes. We have been engaged as the third-party government verification agency, tasked with setting the baseline and verifying results against the five Disbursement Linked Indicators (DLIs) in-built in the scheme.

In a huge step forward for QCI's engagement in India's coal sector, we have been nominated to conduct third-party sampling of coal at Neyveli Lignite Coal Limited (NLCL). The agreement was signed in October 2021, and operations have begun.

As part of our mission to promote India's quality movement, we hosted four Virtual Quality Conclaves this quarter, in association with ASQ and the PHD Chamber of Commerce and Industry. The conclaves focused on the pertinent, topical themes of "Bridging gap between CSR & NGO – An initiative towards achieving sustainable development quality education goal in association with NABET", "Accreditation: Supporting Quality Infrastructure in association with NABL", "Quality Management, Registration/Certifications & Licenses for Entrepreneurs/Start-ups in association with association of Lady Entrepreneurs of India (ALEAP INDIA)" and "NextGen Quality (in association with American Society for Quality (ASQ)". All of these Conclaves brought together a diverse set of ideas and approaches to the subject of continuous quality improvement through the assessment and use of quality standards.

In 2022, we intend to not just deepen our association with our existing partners and stakeholders, but also engage with more institutions across a wider spectrum, solve ever more complex problems, and mainstream a quality-driven mindset in Indian industry. Along the way, we are determined to further streamline our processes, build greater efficiency into our system, and upskill our professionals to help them build sustainable, fulfilling careers.

We are grateful to our valued stakeholders for their mutually beneficial collaboration and for allowing us to serve the country. We are not only celebrating our organisation's 25th anniversary but an anniversary for a family that has defied all odds to achieve something as one.

I wish you all a Happy, Prosperous, and Impactful New Year, and look forward to seeing a fantastic 2022!

Dr Ravi P. Singh, Secretary General, QCI, unveils QCI's Celebratory Logo

CELEBRATING 25TH ANNIVERSARY

QUALITY FIRST

25 Years of Quality Council of India

QCI's 25 years journey has had three consistent elements:

VIBRANCE

FLUIDITY

ADAPTABILITY

07

OUR BOARDS

(Important Milestones of their Journey)

NABL

National Accreditation Board
for Testing and Calibration Laboratories

NABH

National Accreditation Board
for Hospitals and Healthcare Providers

NABET

National Accreditation Board
for Education and Training

NABCB

National Accreditation Board
for Certification Bodies

NBQP
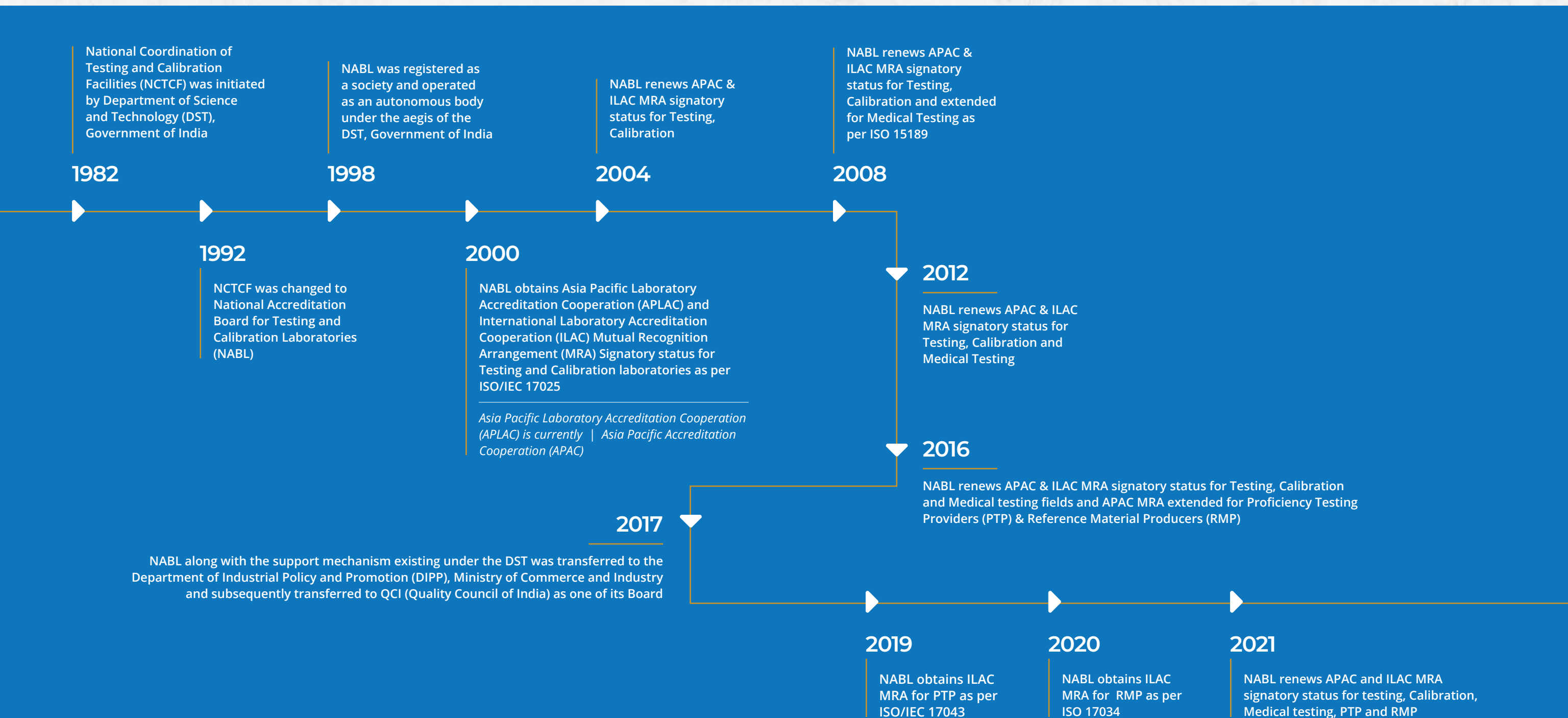
National Board
for Quality Promotion

Inception

The laboratory accreditation program in India was initially setup by Department of Science & Technology, Government of India in 1982 with its name as "National Coordination of Testing & Calibration Facilities (NCTCF)" for providing accreditation services to testing & calibration laboratories. NCTCF, with the cooperation of India's National Metrology Institute (NMI), National Physical Laboratory (NPL), provided accreditation to calibration laboratories. Subsequently in 1993, NCTCF was renamed as "National Accreditation Board for Testing and Calibration Laboratories (NABL)".

National Accreditation Board for Testing and Calibration Laboratories

Vision

To be the world's leading accreditation body and to enhance stakeholders' confidence in its services.

Mission

To strengthen the accreditation system accepted across the globe by providing high quality, value-driven services, fostering APAC/ILAC MRA, empanelling competent assessors, creating awareness among the stake holders, initiating new programmes supporting accreditation activities and pursuing organisational excellence.

1982
National Coordination of Testing and Calibration Facilities (NCTCF) was initiated by Department of Science and Technology (DST), Government of India

1992
NCTCF was changed to National Accreditation Board for Testing and Calibration Laboratories (NABL)

1998
NABL was registered as a society and operated as an autonomous body under the aegis of the DST, Government of India

2000
NABL obtains Asia Pacific Laboratory Accreditation Cooperation (APLAC) and International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) Signatory status for Testing and Calibration laboratories as per ISO/IEC 17025

Asia Pacific Laboratory Accreditation Cooperation (APLAC) is currently | Asia Pacific Accreditation Cooperation (APAC)

2004
NABL renews APAC & ILAC MRA signatory status for Testing, Calibration

2008
NABL renews APAC & ILAC MRA signatory status for Testing, Calibration and extended for Medical Testing as per ISO 15189

2012
NABL renews APAC & ILAC MRA signatory status for Testing, Calibration and Medical Testing

2016
NABL renews APAC & ILAC MRA signatory status for Testing, Calibration and Medical testing fields and APAC MRA extended for Proficiency Testing Providers (PTP) & Reference Material Producers (RMP)

2017
NABL along with the support mechanism existing under the DST was transferred to the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry and subsequently transferred to QCI (Quality Council of India) as one of its Board

2019
NABL obtains ILAC MRA for PTP as per ISO/IEC 17043

2020
NABL obtains ILAC MRA for RMP as per ISO 17034

2021
NABL renews APAC and ILAC MRA signatory status for testing, Calibration, Medical testing, PTP and RMP
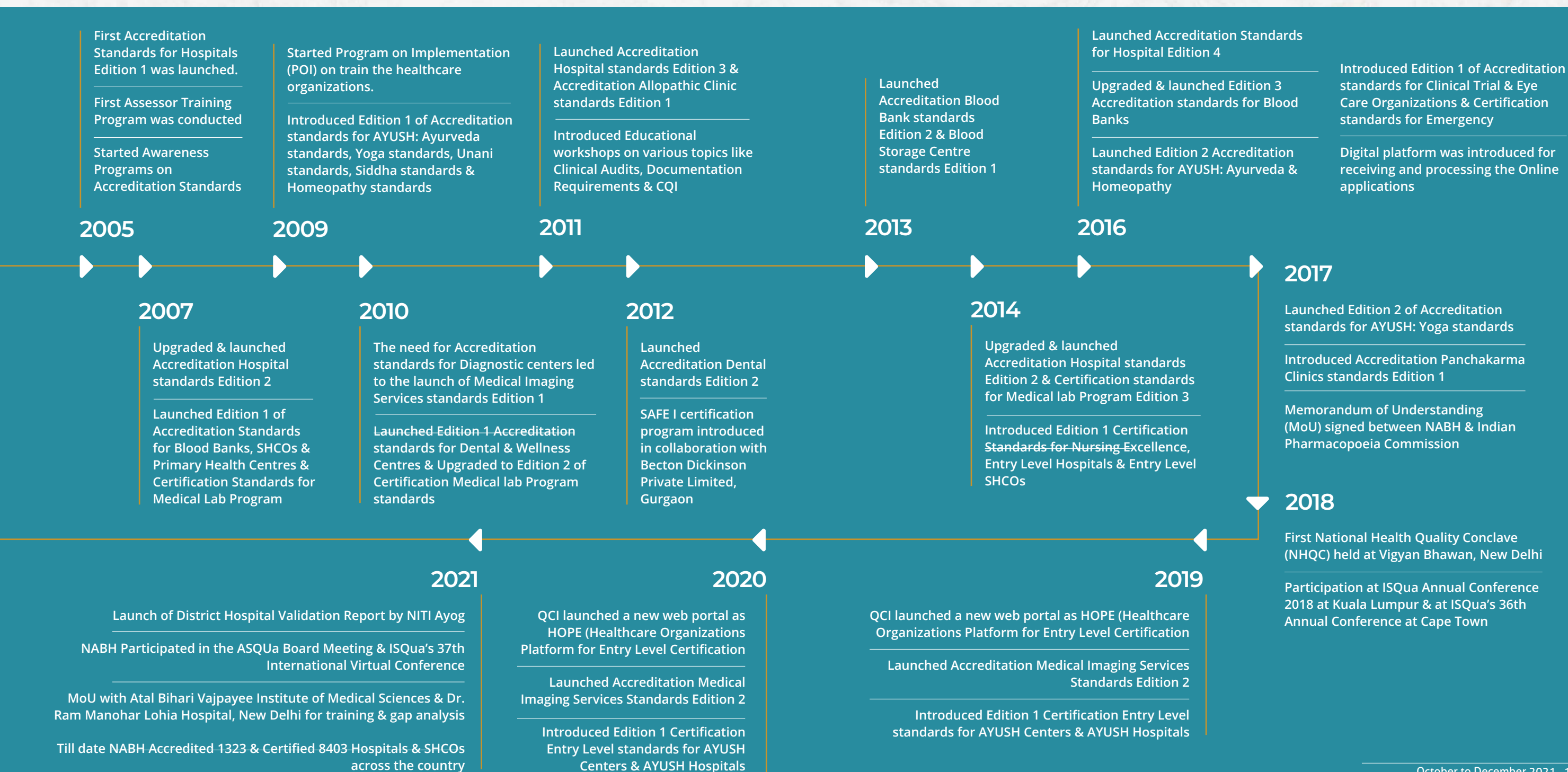
Inception

Since its inception in 2005, NABH has been advancing constantly towards its objective of ensuring Quality Healthcare to one & all and to the last man in the line. Currently, NABH is in its adolescent age where it is taking baby steps towards spreading quality in the healthcare ecosystem. Through the earnest and enthusiastic spirit, NABH team has been certainly raising the bar of quality culture in healthcare higher and still higher. NABH with its dynamic, progressive, receptive, and resilient leadership, is an ever-evolving body setting new benchmarks and putting in unflinching efforts towards their achievements.

National Accreditation Board for Hospitals and Healthcare Providers

Vision

To be the 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.

2005
- First Accreditation Standards for Hospitals Edition 1 was launched.
- First Assessor Training Program was conducted
- Started Awareness Programs on Accreditation Standards

2007
- Upgraded & launched Accreditation Hospital standards Edition 2
- Launched Edition 1 of Accreditation Standards for Blood Banks, SHCOs & Primary Health Centres & Certification Standards for Medical Lab Program

2009
- Started Program on Implementation (POI) on train the healthcare organizations.
- Introduced Edition 1 of Accreditation standards for AYUSH: Ayurveda standards, Yoga standards, Unani standards, Siddha standards & Homeopathy standards

2010
- The need for Accreditation standards for Diagnostic centers led to the launch of Medical Imaging Services standards Edition 1
- Launched Edition 1 Accreditation standards for Dental & Wellness Centres & Upgraded to Edition 2 of Certification Medical lab Program standards

2011
- Launched Accreditation Hospital standards Edition 3 & Accreditation Allopathic Clinic standards Edition 1
- Introduced Educational workshops on various topics like Clinical Audits, Documentation Requirements & CQI

2012
- Launched Accreditation Dental standards Edition 2
- SAFE I certification program introduced in collaboration with Becton Dickinson Private Limited, Gurgaon

2013
- Launched Accreditation Blood Bank standards Edition 2 & Blood Storage Centre standards Edition 1

2014
- Upgraded & launched Accreditation Hospital standards Edition 2 & Certification standards for Medical lab Program Edition 3
- Introduced Edition 1 Certification Standards for Nursing Excellence, Entry Level Hospitals & Entry Level SHCOs

2016
- Launched Accreditation Standards for Hospital Edition 4
- Upgraded & launched Edition 3 Accreditation standards for Blood Banks
- Launched Edition 2 Accreditation standards for AYUSH: Ayurveda & Homeopathy
- Introduced Edition 1 of Accreditation standards for Clinical Trial & Eye Care Organizations & Certification standards for Emergency
- Digital platform was introduced for receiving and processing the Online applications

2017
- Launched Edition 2 of Accreditation standards for AYUSH: Yoga standards
- Introduced Accreditation Panchakarma Clinics standards Edition 1
- Memorandum of Understanding (MoU) signed between NABH & Indian Pharmacopoeia Commission

2018
- First National Health Quality Conclave (NHQC) held at Vigyan Bhawan, New Delhi
- Participation at ISQua Annual Conference 2018 at Kuala Lumpur & at ISQua's 36th Annual Conference at Cape Town

2019
- QCI launched a new web portal as HOPE (Healthcare Organizations Platform for Entry Level Certification
- Launched Accreditation Medical Imaging Services Standards Edition 2
- Introduced Edition 1 Certification Entry Level standards for AYUSH Centers & AYUSH Hospitals

2020
- QCI launched a new web portal as HOPE (Healthcare Organizations Platform for Entry Level Certification
- Launched Accreditation Medical Imaging Services Standards Edition 2
- Introduced Edition 1 Certification Entry Level standards for AYUSH Centers & AYUSH Hospitals

2021
- Launch of District Hospital Validation Report by NITI Ayog
- NABH Participated in the ASQUa Board Meeting & ISQua's 37th International Virtual Conference
- MoU with Atal Bihari Vajpayee Institute of Medical Sciences & Dr. Ram Manohar Lohia Hospital, New Delhi for training & gap analysis
- Till date NABH Accredited 1323 & Certified 8403 Hospitals & SHCOs across the country

![NABET logo]

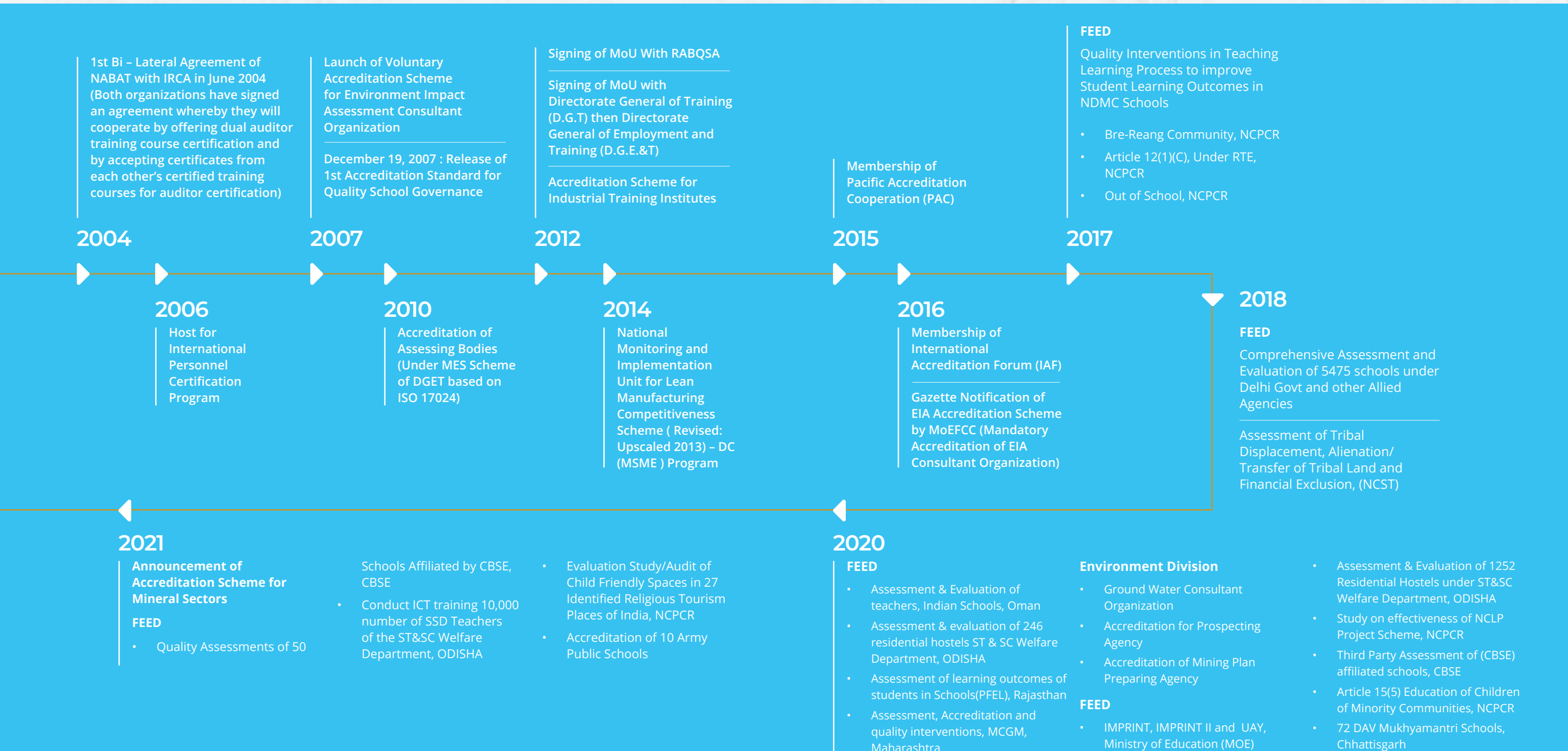**National Accreditation Board for Education and Training**

Inception

In the year 1999, NABET began life as the National Accreditation Board for Auditors and Training (NABAT), which was set up in response to the emerging challenges in the conformity assessment arena with the mandate to establish and monitor the training and auditors registration process. National Accreditation Board for Auditors and Training (NABAT) started working as registrar for auditors and training courses operating in arena of conformity assessment area such as QMS and EMS.

Vision

To develop an eco-system of credible accreditation mechanism in education & training and creating an environment to achieve the defined SDGs.

Mission

To foster sustainable growth for all stakeholders in the field of education, training, skills & services by way of qualitative interventions and an effective, accountable & independent accreditation structure.

2004
1st Bi – Lateral Agreement of NABAT with IRCA in June 2004 (Both organizations have signed an agreement whereby they will cooperate by offering dual auditor training course certification and by accepting certificates from each other's certified training courses for auditor certification)

2006
Host for International Personnel Certification Program

2007
Launch of Voluntary Accreditation Scheme for Environment Impact Assessment Consultant Organization

December 19, 2007 : Release of 1st Accreditation Standard for Quality School Governance

2010
Accreditation of Assessing Bodies (Under MES Scheme of DGET based on ISO 17024)

2012
Signing of MoU With RABQSA

Signing of MoU with Directorate General of Training (D.G.T) then Directorate General of Employment and Training (D.G.E.&T)

Accreditation Scheme for Industrial Training Institutes

2014
National Monitoring and Implementation Unit for Lean Manufacturing Competitiveness Scheme (Revised: Upscaled 2013) – DC (MSME) Program

2015
Membership of Pacific Accreditation Cooperation (PAC)

2016
Membership of International Accreditation Forum (IAF)

Gazette Notification of EIA Accreditation Scheme by MoEFCC (Mandatory Accreditation of EIA Consultant Organization)

2017
FEED
Quality Interventions in Teaching Learning Process to improve Student Learning Outcomes in NDMC Schools

- Bre-Reang Community, NCPCR
- Article 12(1)(C), Under RTE, NCPCR
- Out of School, NCPCR

2018
FEED
Comprehensive Assessment and Evaluation of 5475 schools under Delhi Govt and other Allied Agencies

Assessment of Tribal Displacement, Alienation/ Transfer of Tribal Land and Financial Exclusion, (NCST)

2020
FEED
- Assessment & Evaluation of teachers, Indian Schools, Oman
- Assessment & evaluation of 246 residential hostels ST & SC Welfare Department, ODISHA
- Assessment of learning outcomes of students in Schools(PFEL), Rajasthan
- Assessment, Accreditation and quality interventions, MCGM, Maharashtra

Environment Division
- Ground Water Consultant Organization
- Accreditation for Prospecting Agency
- Accreditation of Mining Plan Preparing Agency

FEED
- IMPRINT, IMPRINT II and UAY, Ministry of Education (MOE)

- Schools Affiliated by CBSE, CBSE
- Conduct ICT training 10,000 number of SSD Teachers of the ST&SC Welfare Department, ODISHA

- Evaluation Study/Audit of Child Friendly Spaces in 27 Identified Religious Tourism Places of India, NCPCR
- Accreditation of 10 Army Public Schools

- Assessment & Evaluation of 1252 Residential Hostels under ST&SC Welfare Department, ODISHA
- Study on effectiveness of NCLP Project Scheme, NCPCR
- Third Party Assessment of (CBSE) affiliated schools, CBSE
- Article 15(5) Education of Children of Minority Communities, NCPCR
- 72 DAV Mukhyamantri Schools, Chhattisgarh

2021
Announcement of Accreditation Scheme for Mineral Sectors
FEED
- Quality Assessments of 50

Q ®

NABCB

National Accreditation Board for Certification Bodies

Inception

Bearing the torch as the first Chairman of NABCB, Mr. S. K. Bhargava, who hailed from a very reputed industry M/s Eicher Goodearth Ltd. led the establishment of NABCB. In a meeting held on 10 July 1999 under his esteemed Chairmanship along with Mr. V. K. Mediratta, Secretary General, QCI and 3 other members, one each from CII, BIS and BVQI, the composition and tenure of the NABCB Board, its organizational structure, proposed fee structure and accreditation schemes were finalized.

Vision

The Board shall strive to be a leading accreditation body in the world maintaining impartiality and transparency, and offering its services as per national and international requirements, meeting the evolving needs of its various stakeholders to their utmost satisfaction, and to facilitate better quality products and services in the market for the consumers.

Mission

The Board as a national body shall strive to continually enhance quality ecosystem in the country by providing credible, reliable accreditation services meeting international standards and best practices, and achieve international recognition through multilateral mutual recognition arrangements of international / regional bodies like IAF, ILAC, APAC etc. to support all relevant stakeholders and facilitate trade.

2000
Launched Quality Management Systems (QMS) & Environment Management Systems (EMS) Schemes

2001
First accreditation for QMS & EMS were granted

2002
Signed IAF MLA & APAC MRA for QMS

2006
Launched Food Safety Management Systems (FSMS), Inspection Bodies (IB) and Product Certification (PCB) Schemes

2007
Signed IAF MLA & APAC MRA for EMS

First accreditation for FSMS was granted

2008
First accreditation for IB & PCB were granted

2019
Singed IAF MLA & APAC MRA for PrCB

Launched Greenhouse Gases Validation & Verification Bodies Scheme

Launched Business Continuity Management Systems (BCMS)

First accreditation for Greenhouse Gas (GHG) was granted

2010
Launched Occupational Health & Safety Management Systems (OHSMS) Scheme

2011
Launched Information Security Management Systems (ISMS) Scheme

First accreditation for OHSMS was granted

2012
Launched QMS for Medical Devices (MDQMS) Scheme

2013
Launched Energy Management Systems (EnMS) Scheme

Signed IAF MLA & APAC MRA for PCB

Signed ILAC MRA & APAC MRA for Inspection

First accreditation for EnMS & ISMS were granted

2014
Signed IAF MLA for Global GAP

Signed APAC MRA for FSMS & ISMS

Launched Personnel Certification (PrCB) Scheme

First accreditation for ISMS was granted

2016
Signed APAC MRA for Global GAP

2015
Signed IAF MLA for FSMS

Signed IAF MLA & APAC MRA for ISMS

Launched Road Traffic Safety Management Systems (RTSMS) Scheme

2021
Singed APAC MRA for GHG, ICAO CORSIA Version 1 & FSSC 22000

Launched Asset Management Systems (AMS) Scheme

2020
Signed IAF MLA for OHSMS

Signed IAF MLA & APAC MRA for MDQMS

Launched Anti-Bribery Management Systems (ABMS) Scheme

2018
Signed IAF MLA for EnMS

Signed APAC MRA for OHSMS

First accreditation for Personnel Certification was granted

Inspection Body Scheme crossed 50 accreditation

2017
Signed APAC MRA for EnMS

Launched Trustworthy Digital Repositories Management Systems (TDRMS) Scheme

First accreditation for TDRMS was granted

National Board for Quality Promotion (NBQP)

Quality Council of India — 25th Anniversary

Inception

Realizing the need that the country requires establishment of quality culture to support economic growth, Quality Council of India (QCI) started National Quality Campaign (NQC) for which a NQC Committee was established in February 1999. The main focus of the committee was to conduct various industry – focused programs to improve quality and competitiveness across different sectors of industry.

Vision

The Board operates on the Vision for building "Quality for National Wellbeing". It endeavors to work towards this vision by promoting application of quality management standards and statistical quality tools, enabling industry to improve quality competitiveness of industry in general and SME sector in particular, and also by empowering the consumers to demand quality and create pressure on suppliers to deliver the same.

Mission

By initiating Quality Conclaves, Quality Awards, Quality Awareness Programs, Registration Schemes, Assessment projects, Projects related to System Improvements on QHSE, Energy, etc. it sensitizes the manufacturing sectors largely as well as its connected service sectors, thereby enabling industries to improve quality competitiveness amongst SME's.

Timeline

2006
- NBQP Board established -- 28th Feb 2007
- 2nd NQC on 09-10 February 2007 (President of India, Chief Guest) QCI - Quality D.L. Shah Award Scheme launched

2007
- Start of National Quality Campaign activities under 11th Plan Fund
- Awareness Programs on Health

2008
- Conducted Awareness Programs across the country focusing on Education, Healthcare, Public Service, and Industry – 170 programs
- Survey on assessing the effectiveness of quality management systems certification process
- Study on evaluation of Lead-based paint manufacturing in India.

2009
- Regional Level Quality Conclave specifically for Healthcare and Education sector
- Study on National Citizen satisfaction Index in 28 States
- Impact assessment of standards and tools in the Indian Automotive component sector and Indian Textile manufacturing sector
- Initiated Lean Six Sigma improvement projects in the healthcare sector

2010
- QCI Membership Scheme launched
- Conducted Awareness Programs Across the Country focusing on Education, Healthcare and Industry – 87 programs
- World Quality Day celebration
- Study on utilization of QTT

2011
- Quality Evaluation and Empowerment of Gram Panchayat with Panchayati Raj of State Govt.
- Conducted Awareness Programs Across the Country focusing on Education, Healthcare and Industry – 60 programs

2012
- and QMS in leather goods manufacturing units
- Organized International Congress on Productivity, Quality, Reliability, Optimization, and Modelling (ICPQROM) with India Statistical Institute (ISI) and Defense Research and Development Organisation (DRDO)
- ISO 9001 implementation in government.
- Quality Tax Certification provided to Gram Panchayats
- Implementation of Continuous Quality Improvement (CQI) in PHCs & CHCs of one State Govt.

2013
- 1st Technical Publication of QCI - D. L. Shah Award "Quality Best Practice"
- 1st Seminar on World Quality Day
- Implementation of Continuous Quality Improvement (CQI) in PHCs & CHCs of one State Govt.

2014
- ISO 9001 certification of Chief Minister office & other GOI offices (MP Govt.)

2015
- Implementation of Kaizen in top GOI offices
- Nov Quality Month celebration

2016
- Promotion of ZED Certification Scheme of MSMEs:
- Awareness – 372 | Training - 43
- Awareness Program through plan fund – 17 programs
- Awareness Program through own fund – 5 programs

2017
- Promotion of ZED Certification Scheme of MSMEs:
- Awareness – 254 | Training – 74

2018
- Launch of Regional Quality Conclave (RQC)
- QCI - D.L. SHAH Quality Champion Awards
- Assessment through PCMM® in CPSEs
- Implementation of EnMS in selected sectors of CPSEs/SPSEs
- Supporting the Swachh Survekshan initiative by facilitating ULBs

2019
- QCI Quality Champion Award
- 1st Cycle of EEPC India QCI Quality Award
- Industry 4.0 Pilot gap study
- Implementation of OHSMS in CPSE

2020
- Virtual Quality Conclave
- Webinar and Training

2021
- Launch of Prof. S.K Joshi Lab Excellence Award

ART CAMP - Painting Commemorating 25 Years of QCI

November 9 to November 12, 2021

Creative art has been the source of human expressions since time unknown. Right from Bhimbetka to Ajanta Ellora, the human mind has often resorted to colors and strokes to memorize their evolutionary story.

We at QCI are observing our 25th Foundation Day. In this connection, an 'Art Camp- Painting' was organized from 9 to 12 November, 2021 at Institution of Engineers Building.

The story of India at 75 and QCI at 25, both have been phenomenal worth immortalizing on canvas. Keeping this in mind, we invited India's prominent artists to eternalize its journey. We not only want to celebrate the past but look forward also at the future with eyes full of dreams.

We envisaged the art camp to bring life to the vision of India that every citizen dreams of in the context of the work done by QCI. Hence, the theme- 75 Years of India and 25 Years of Quality Council of India.

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quality-council-of-india-qci-
info@qcin.org

QUALITY COUNCIL OF INDIA
Creating an Ecosystem for Quality

UNCIL OF INDIA
neers Building, 2nd Floor,
afar Marg, New Delhi - 110002

Art Camp

ng the Quality Journey

Art Camp

Ram Pratap Verma

rpverma57@gmail.com

My name is Ram Pratap Verma, and I am from Chandigarh. This piece is part of a series called "Layers of Time," in which people are experiencing urbanization and progress but there is no communication or dialogue in the society. Similarly, everything is present in my painting, but no human form that is 'Life' is present. We should cherish and celebrate life, because the fact that it is a magnificent gift from the God.

QCI'S
25 YEARS OF JOURNEY
THROUGH
THE EYES OF
ARTISTS
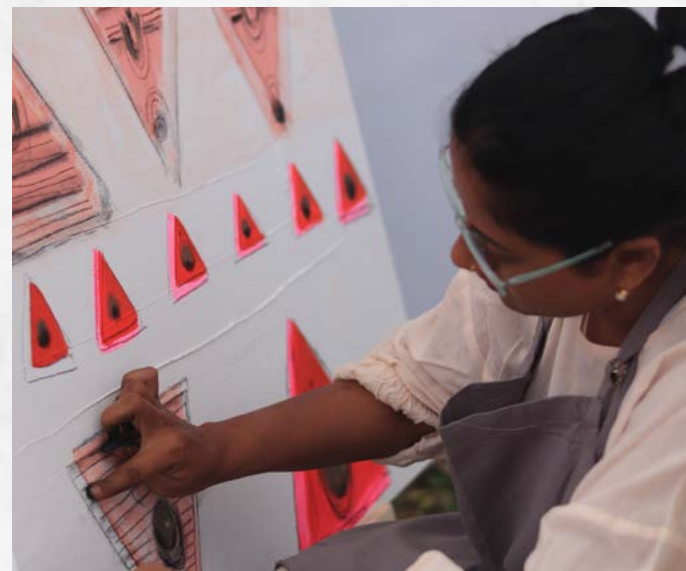
National Accreditation Board for Testing and Calibration Laboratories

Updates from October to December 2021

NABL conducted interactive sessions (NABL Qualmacon 2021) with the person responsible for quality management system in their respective organizations in the field of Testing and Calibration as per the following details:

1. West Zone- 11.10.2021
2. South Zone- 19.10.2021
3. East Zone- 19.10.2021
4. North Zone- 25.10.2021

More than 500 quality managers actively participated in the interactive sessions and shared their views on best practices adopted/followed by them to fulfil the standard requirements (for example Internal Audit, Management Review, Ensuring Validity of Results etc.).

During the discussion regarding existing NABL documents, laboratory's representatives showed satisfaction with existing NABL documents. They were also of the view that, if possible, few specific criteria documents in the discipline of Chemical, Biological, Electrical, Electronics etc. may be reintroduced and extended their co-operation in preparing/ reviewing such documents. They were also of the view that ISO/IEC 17025: 2017 interpretation document may also be prepared for better understanding and implementation of the standard requirements.

Laboratories were invited to share their best practices in article form which may be published in NABL Newsletter.

During the discussion, it was discussed that a guidance document may be prepared to harmonize the assessment process.

They also showed their keen interest to be involved in the review of external origin documents for example documents received from ILAC/ APAC etc.

NABL has re-emphasized that laboratory should follow the timelines such as renewal of application has to be submitted six months before expiry; surveillance application has to be submitted after 10 months from the grant/ renewal of accreditation.

CEO, NABL appreciated the involvement and proactiveness showed by the participants during interactive sessions.

Interested Quality Managers can inform their willingness to volunteer for the above activities by writing to qa@nabl.qcin. org.
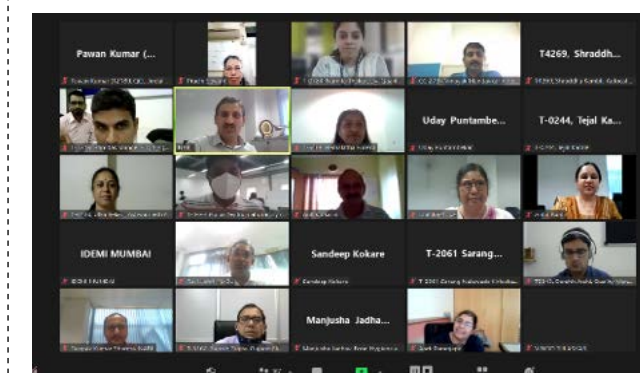
WEST ZONE - 11 OCTOBER 2021

SOUTH ZONE 19 OCTOBER - 2021

NORTH ZONE - 25 OCTOBER 2021

NABL | NABH | NABET | NABCB | NBQP | ARTICLES

Assessor Training Programme on ISO/IEC 17025: 2017 - (29th September to 1st October 2021)

NABL Assessor Training Course on ISO/IEC 17025: 2017 conducted at Gurugram (29th September to 1st October 2021). 20 participants attended the program.

NABL ASSESSOR TRAINING

NABL Awareness Program for NSSHO – Pune – (8th October 2021)

The program aimed at sensitizing the MSME units of Pune region about the benefits of testing their product/material in NABL Accredited Laboratories.

Around 20 MSME units participated in the program. Participants were made aware about how to search for NABL accredited laboratories and how to

NSSHO – PUNE

approach the laboratories which require tests in their scope of accreditation. Participants were found to be interested in testing of food products, packaging material, metallography testing etc. There were queries related to fluid flow calibration (orifice plates).

The NSSHO officials appreciated NABL's efforts to sensitize the MSME units about availing the services of NABL Accredited Laboratories.

Assessor Training Programme on ISO/IEC 17025: 2017 - (21st to 23rd October 2021)

NABL Assessor Training Course on ISO/IEC 17025: 2017 conducted in Bengaluru (21st to 23rd October 2021). 20 participants attended the program.

NABL Awareness Program for NSSHO – Surat – (12th October 2021)

An awareness program on the benefits of using NABL accredited laboratory services conducted on 12th October, 2021 with NSSHO, Surat for the MSME units of Gujarat. The units were made aware about NABL accreditation and its advantages in product/material testing during development and ensuring quality of any product.
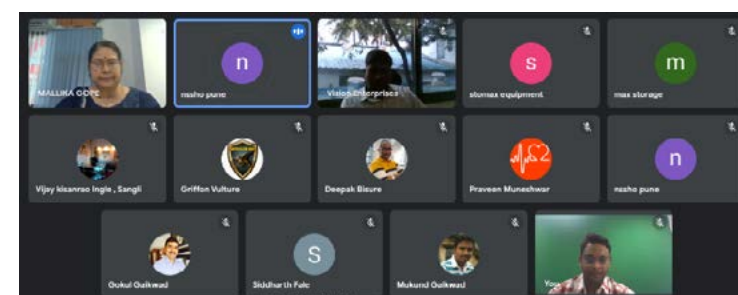
The units were made aware about how to search for NABL accredited laboratories on the NABL website, NABL

NABL Awareness Program for NSSHO – Patna

NABL took an initiative to conduct an awareness program to sensitize the MSME units of Patna, Bihar, on Quality Product Development and for NABL Accreditation and its advantages in Product/Material Testing.

Around 20 Participants having expertise in different areas like rice and wheat processing, safety shoes, leather products etc. benefitted from the program. They were made aware about how to obtain NABL Accreditation and its benefits during this awareness program. Demonstration of NABL website, NABL documents and Newsletter with latest advances, News and Business Opportunities was also done.

documents and Newsletter with latest advances, News and Business Opportunities. Awareness was also imparted about the importance of NABL Symbol on test reports.

More than 30 participants benefitted from the program and it was observed during question & answer session where participants were found to be interested in knowing more about EMI/EMC Testing, Legal Metrology, Traceability, PTP, RMP etc.

NABL Awareness program for NSSHO – Mumbai

NABL took an initiative and conducted an Awareness program to sensitize the MSME units in association with NSSHO-Mumbai, Maharashtra. During this virtual awareness program, participants were made aware about NABL accreditation and its advantages in product/material testing. Participants were also given a detailed view of NABL Website, various NABL Documents, Newsletters and latest advances with News and Business Opportunities.

More than 50 Participants benefitted from the program and were found to be interested in Testing and Calibration especially in areas of testing of food products, packaged drinking water, jewelry, packaging materials etc.

Requests to conduct another NABL Awareness program were made by the participants.

Program on ISO 17034: 2016 General requirements for the competence of reference material producers – (27th – 29th October 2021)

NABL ASSESSOR TRAINING COURSE ON ISO/IEC 17025: 2017 CONDUCTED IN BENGALURU

NABL conducted a program on ISO 17034: 2016 General requirements for the competence of reference material producers from 27th – 29th October 2021. More than 25 participants benefitted from the program.

Integrity Pledge - (26th October 2021)

In line with Vigilance Awareness Week – 2021 themed 'Independent India @75:

Self Reliance with Integrity' from 26th October to 1st November 2021, all NABL officials took the Integrity Pledge.

NABL TechSympo 2021

NABL conducted a series of Technical Symposiums (NABL TechSympo-2021) during November 2021. This interactive programme was aimed at technical discussions between NABL Accredited Calibration Laboratories and NABL.

The objective of programme was to discuss key technical issues being faced by the laboratory fraternity on following topics: -

- Traceability of measuring equipment (NABL 142, calibration frequency etc.)
- Calibration methods (in-house methods, validation etc.)
- Estimation of MU (difference between MU and CMC; raw data record; calculation etc.)
- IQC (recalibration of retained items, replicate calibration, PT/ILC etc.)

26 OCTOBER 2021

- Points observed during scrutiny of lab application (feedback to labs, changes in NABL documents etc.)

The TechSympo conducted for the following disciplines in calibration field:

Calibration – Mechanical (Force, Hardness, Impact, Torque) - on 9th November 2021

Calibration – Electro-Technical & Thermal - on 10th November 2021

Calibration – Fluid Flow, Optical, Medical Devices and Radiology - on 11th November 2021

Calibration - Mechanical (Dimension, Mass etc.) - on 12th November 2021

Mr. N. Venkateswaran, CEO, NABL inaugurated the event & urged the participating laboratories to make use of technical discussions happening during the event.

Mr. Avijit Das, Director presided the overall events along with Mr. Srikanth R, Joint Director & Ms. Shally Sharma, Joint Director.

The calibration team of officers - Mr. Ram Ashray Kushwaha, Mr. Pankaj Varshney, Mr. Vishal Shukla, Ms. Sangeeta Kunwar, Ms. Mamta Bharti, Mr. Abhinav Thakur, Mr. Ashish Kakran organized / participated actively during the events.

NABL got an overwhelming response during all the events from the laboratories with Technical Managers representing 250+ laboratories participated actively during this interactive session.

NABL acknowledged with sincere gratitude to the Technical Experts from National Physical Laboratory India (NPLI), Delhi who in spite of their busy schedule agreed to the invitation for TechSympo & responded to the participant's questions (Dr. S. Seelakumar Titus, Mr. Dubey, Mr. Dilip Dhondiram Shivagan, Mr. Parag Sharma, Mr. Goutam Mandal and Dr. K.P Chaudhury).

Swachhata Pledge - (November 1st – November 15th, 2021)

NABL officials in observance of Swachhata Pakhwada (November 1st – November 15th, 2021) took the Swachhata Pledge on 01st November, 2021.

NABL Awareness program on NABL M (EL) T Labs Program – (15th November 2021)

01 NOVEMBER 2021

NABL Awareness program on NABL Accreditation: Empowering Consumers on Quality

The World Quality Day 2021 with the theme 'Sustainability: Improving our Products, People and Planet' celebrated with an NABL awareness program organized jointly by NABL, The North East Christian University (NECU) & Healthy you Foundation, Delhi.

The awareness program conducted at Dimapur, Nagaland both virtually and with physical participation.

NABL conducted an awareness program on NABL M(EL)T Labs Program with National Aids Control Organization (NACO) – Maharashtra State AIDS Prevention and Control Societies (SACS) and SHARE INDIA (15th November 2021).

Around 50 participants, belonging to Integrated Counselling and Testing Centres (ICTC) under NACO - Maharashtra SACS and SHARE INDIA were sensitized about the process of the M(EL)T application and benefits of the program. The program was based on successful PT participation from accredited PT Providers.

NABL Stakeholders' Meeting (Testing Laboratories) –

NABL conducted meeting with Testing Laboratory Stakeholders.

Key points of discussion during the meetings were w.r.t Clarification regarding dealing with the Non-Conformities (NCs) detected during the assessment (acceptance / non-acceptance of NCs), need of specific criteria for MU calculations.

Testing laboratories appreciated the visibility of changes being made by NABL to ensure continuous improvements in accreditation services and expressed thanks and encouraging remarks for the regular stakeholders' meetings.

NABL Stakeholders' Meeting (Calibration Laboratories) –

NABL conducted meeting with calibration laboratory stakeholders.

Key points of discussion during the meetings were w.r.t Block chain portal & QR code implementation in calibration certificate, Implementation of NABL 133, release of revised NABL documents.

Calibration Laboratories appreciated the visibility of changes being made by NABL to ensure continuous improvements in accreditation services and expressed thanks and provided encouraging remarks for the regular stakeholders' meetings.

NABL Orientation program on ISO/IEC 17025: 2017

NABL conducted an Orientation program in accordance with ISO/IEC 17025:2017 including auditing techniques (16th to 19th November 2021) for Tele-communication Engineering Centre (TEC) officials. About 26 officials from TEC attended the program.

Ms. Deepa Tyagi, Sr. DDG and Head TEC graced the occasion and emphasized that this orientation program will help TEC to strengthen their CAB Designation Scheme.

NABL Awareness program with NSSHO, Chennai (18th November 2021)

An Awareness program was conducted by NABL in association with NSSHO-Chennai to sensitize the MSME units of Chennai region about NABL Accreditation on 18th November, 2021.

The program was inaugurated by Shri. N. Venkateswaran, CEO NABL. During this interactive program, information was shared with the participants about the availability of NABL Accredited Laboratories for various products and also about the benefits of availing the testing services of laboratories that are accredited by NABL. Around 35 participants benefitted from the program by gaining information and detailed overview about NABL Website, various NABL Documents, NABL Newsletters and latest advances informed through News and Business Opportunities.

The program was greatly appreciated by the NSSHO as well as the MSME units. Participants requested to conduct more such awareness programs about NABL Accreditation for the benefit of the industry.

NABL Stakeholders' Meeting (Medical Testing Laboratories) – (22nd November, 2021)

NABL conducted meeting with Medical Testing Laboratory Stakeholders'. The laboratories were updated on the ongoing revision of ISO 15189 standards and the business opportunity for Medical Testing Laboratories.

Medical Testing Laboratories provided feedback w.r.t possibility to avail parallel processing of information's / declarations to be submitted to NABL on portal which is not possible if any existing activity is under process, clarification on NABL 133, changes to NABL 112.

Medical Testing Laboratories appreciated the visibility of changes being made by NABL to ensure continuous improvements in accreditation services and expressed thanks and provided encouraging remarks for the regular stakeholders' meeting.

NABL Stakeholders' Meeting (PTPs and RMPs) – (22nd November, 2021)

NABL conducted meeting with Proficiency Testing Providers (PTPs) and Reference Material Producers (RMPs).

Key points of discussion during the meetings were w.r.t PT programs for Calibration Laboratories, increased RM material acceptance.

PTPs and RMPs appreciated the visibility of changes being made by NABL to ensure continuous improvements in accreditation services and expressed thanks and encouraging remarks for the regular stakeholders' meeting.

NABL Awareness program on NABL M(EL)T Labs Program – (23rd November 2021)

NABL conducted an awareness program on NABL M(EL)T Labs Program with National Aids Control Organization (NACO) – Tripura State AIDS Prevention and Control Societies (SACS) on 23rd November, 2021.

Participants belonging to Integrated Counselling and Testing Centres (ICTC) under NACO - Tripura SACS were sensitized about the process of the M(EL)T application and benefits of the program. The program is based on successful PT participation from Accredited PT Providers.

NABL Awareness program with NSSHO, Agra- (23rd November 2021)

An Awareness program conducted by NABL to sensitize the MSME units of Agra region on 23rd November 2021 about NABL Accreditation. This program conducted in association with NSSHO-Agra.

The program was graced by Shri. N. Venkateswaran, CEO, NABL. During this interactive program, more than 50 participants were made aware about NABL accreditation and the benefits of availing product/material testing from NABL Accredited Laboratories, Accreditation Procedure and different areas of Accreditation being covered by NABL. A detailed overview of NABL website along with various NABL Documents including NABL Newsletters and latest advances with News and Business Opportunities were also given to participants.

The program was greatly appreciated by the NSSHO as well as the MSME units. Participants requested to conduct more such awareness programs about NABL accreditation for the benefit of the industry.

Program on ISO/IEC 17043: 2010 General requirements for the competence of Providers of Proficiency Testing

NABL conducted training program in Mumbai on ISO/IEC 17043: 2010 general requirements for the competence of providers of proficiency testing from 24th - 27th November 2021.

20 participants benefitted from the program. Participants were from Accredited PT providers, Potential PT providers, Testing laboratories, and Calibration laboratories.

QUALITY ASSURANCE AT POINT OF CARE | THE WESTGARD LESSONS – (12th November 2021)

NABL participated in the AcuCare Series Session 2, Quality Assurance At Point Of Care, The Westgard Lessons, Ensuring quality in blood gas testing on 12th Novemebr 2021.

Mr. N Venkateswaran, CEO, NABL was the Chairperson for the program which had the participation from Dr. James Westgard and Mr. Sten Westgard who spoke on the topics of Evolutionary landscape of QC testing: Focus on patient safety (Dr. James Westgard) and Ensuring quality in Blood Gas Testing: Paradigm shift in QC (Mr. Sten Westgard).

Assessor Training Programme on ISO/IEC 17025: 2017 – (29th November to 3rd December 2021)

NABL Assessor Training Course on ISO/IEC 17025: 2017 conducted at Gurugram during 29th November to 3rd December, 2021.20 participants attended the program.

Assessor Training Programme on ISO/IEC 17025: 2017 - (13th to 17th December 2021)

NABL Assessor Training Course on ISO/IEC 17025: 2017 conducted at NPL, Delhi (13th to 17th December 2021).

NABL Awareness program for NSSHO - Guwahati – (17th December 2021)

With the aim to spread awareness among the MSME units about NABL Accreditation and its benefits, NABL took an initiative and conducted an awareness program to sensitize the MSME units of Guwahati region about NABL accreditation.

"NABL is committed to Quality" Mr. N. Venkateswaran, CEO, NABL emphasized during his special address in the program.

Entrepreneurs present in this program were made aware about NABL accreditation and its advantages in product/material testing. They were also sensitized about the accreditation procedure and various areas of Testing and Calibration in which Accreditation are services being provided by NABL. A detailed overview of NABL Website along with various NABL Documents, NABL Newsletters and latest advances published as Business Opportunities was also given to

participants. More than 45 participants benefitted from the awareness program.

The program was greatly appreciated by the NSSHO, Guwahati as well as the audience as they were made aware about the significance of accreditation in the entire field of product testing and global acceptance of test reports from NABL Accredited Laboratories.

Participants requested NABL to conduct more such NABL awareness programs.

24TH -27TH NOVEMBER 2021

29 NOVEMBER – 3 DECEMBER 2021

13-17 DECEMBER 2021

NABL Awareness program on NABL M(EL)T Labs Program

NABL conducted an awareness program on NABL M(EL)T Labs Program with National Aids Control Organization (NACO) and respective State AIDS Prevention and Control Societies (SACS).

Participants, belonging to Integrated Counselling and Testing Centers (ICTC)

under NACO respective state SACS were sensitized about the process of the M(EL)T application and benefits of the program. The program is based on successful PT participation from accredited PT Providers.

NABL TechSympo

Chemical Discipline

Petroleum, Solid Fuels, Metals, Ores & Minerals on 27 December 2021

27 DECEMBER 2021 M & NDT

MARK OF
EXCELLENCE

National Accreditation Board for Hospitals and Healthcare Providers (NABH) is a constituent board of Quality Council of India (QCI), set up to establish and operate accreditation programme for healthcare organizations.
NABH has been established with the objective of enhancing health system & promoting continuous quality improvement and patient safety. The board while being supported by all stakeholders, including industry, consumers, government, has full functional autonomy in its operation.

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

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

Vision
To be apex national healthcare accreditation and quality improvement body, functioning at par with global benchmarks
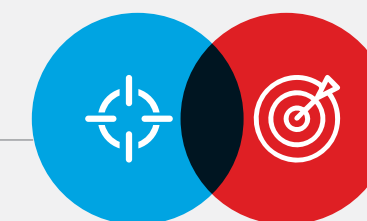
Mission
To operate accreditation and allied programs in collaboration with stakeholders focusing on patient safety and quality of healthcare based upon national/ international standards, through process of self and external evaluation

NABH **Activities**

NABH Accreditation Programs

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

NABH Certification Programs

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

NABH International

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

Training & Education

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

For further details please contact:
National Accreditation Board of Hospital and Healthcare Providers Quality Council of India
5ᵀᴴ Floor, ITPI Building, 4A, Ring Road, IP Estate, New Delhi-110002, India
Ph.: 011-42600600; **Fax:** 23323415; **Email:** helpdesk@nabh.co; **Website:** www.nabh.co
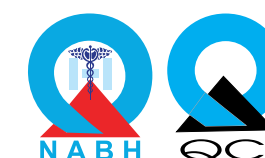
nabh.co

National Accreditation Board for Hospitals and Healthcare Providers

NABH

Updates from October to December 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 a 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.

A total of 1917 assessments were conducted for Accreditation, Certification and Empanelment during October 2021 to December 2021.

S.No.	Program	Assessment Conducted
1.	Assessment for Accreditation/ Certification / Empanelment Program	1256
2.	Desktop Surveillance Assessments for Accreditation Programs	102
	Total	**1358**

Assessment Conducted from *October 2021 to December 2021*

1358   1256   102

- Assessment for Accreditation/ Certification / Empanelment Program
- Desktop Surveillance Assessments for Accreditation Programs
- Total
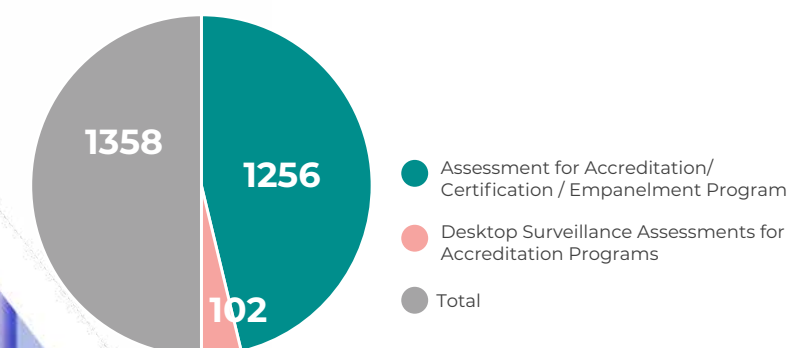
Accreditation/Certification/ Recommendations for Empanelment granted

S.No.	Program	Accreditation/ Certification Granted
1.	Accreditation Program	69
2.	Certification Program	296
3.	Empanelment Program	77
	Total	**442**

Accreditation, Certification & Empanelment Status
from October 2021 to December 2021
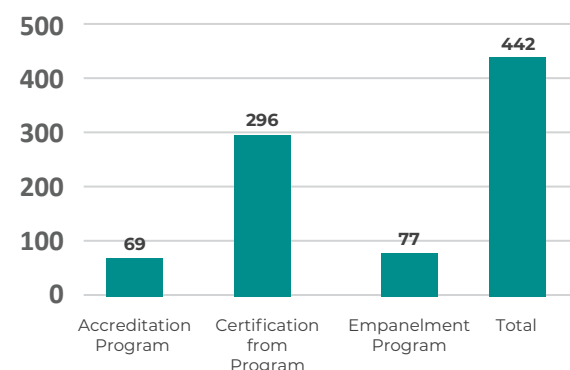
Quality Connect-Learning with NABH

NABH has announced the enriched continuation of "Quality Connect-Learning with NABH" initiative under which free monthly trainings, 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 (PoI) were conducted on NABH Accreditation Standards of Hospitals, AYUSH, Blood Bank and Nursing Excellence, 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 providers on implementation of NABH standards. These programs are instrumental in developing internal capability within the hospitals to work towards the implementation of quality and patient safety standards, achieving accreditation and maintaining the same.

- During the period, 25 educational workshops were conducted on virtual mode wherein more than 1000 healthcare professionals participated.

Entry-Level Certification Awarded to Safdarjung Hospital, Delhi

NABH Awarded Entry-Level Certification to Safdarjung Hospital, New Delhi.

NABH Participate in Fit India Campaign

In order to commemorate #AzadiKaAmritMahotsav, an initiative of the Government of India to celebrate 75 years of progressive India, from 13 August 2021 to 2 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 Committees for final review:

- Small Healthcare Organization 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

Celebration of Patient Safety Day

Participation in Fit India Freedom Run 2.0

Program on Implementation (PoI) Training conducted for RML Hospital, New Delhi

Integrity Pledge by Team NABH

Celebration of Patient Safety Day

An MoU Signed with RML Hospital, Delhi, for GAP Analysis

Program on Implementation (PoI) Training conducted for GAIMS, Bhuj

National Accreditation Board for Education and Training

Updates from October to December 2021

Formal Education Excellence Division (FEED)

Assessment and Evaluation Projects:

Capacity Building of 10,000 Teachers on ICT Tools & Techniques

FEED has received a Letter of Intent from Department of ST & SC Development, Minorities and Backward Classes Welfare, Odisha to conduct training programs for 10,000 teachers. The objective is to enhance skills of teachers on blended teaching & learning. As of now, 70 batches out of 100 batches have been successfully completed.
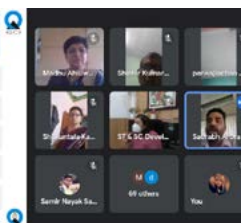
Study on "Child Friendly Spaces"

National Commission for Protection of Child Rights (NCPCR) issued a work order to FEED-NABET in December 2021 to conduct evaluation of 27 identified religious tourism places of India. The objective is to ensure zero tolerance towards Child Labour and Child Begging. Till now, 21 religious places have been assessed with respect to administrations & initiatives undertaken by respective departments of the State on the ground. The final report will be submitted to the department post-completion of on-ground assessment in all the religious places.

Stakeholders' Meeting in Rishikesh & Jaipur

Third-Party Audit of 50 CBSE Affiliated Schools

CBSE issued a work order to FEED-NABET in November 2021 to measure & monitor the quality of affiliation process based on pedagogical process and infrastructural requirements suggested and specified for desired learning outcome by CBSE & further monitoring the learning outcome. Presently, the project is at developmental phase where experts committee has been constituted to finalise the framework for the execution of project.

Organized Conclave on bridging the gap between CSR & NGO – an initiative towards achieving Sustainable Development Quality Education Goal

The primary objective of the conclave organized on 1st October 2021 was to iron out the existing gaps and develop a roadmap for corporates and NGOs in India to strengthen the ecosystem required for delivering quality education. In the conclave, approximately 160+ individuals participated from NGOs, CSRs and school education fraternity from India & abroad.

The program was designed for NGOs, CSRs, Principals, Educationists, Management Committee Members, Education System Coordinators, Teachers, School Administrators, Curriculum Developers, Education Consultants and Education Department officials.

NABL | NABH | NABL | **NABET** | NABCB | NBQP | ARTICLES

The conclave was divided into 3 sessions namely; Inaugural session, Technical session 1 and Technical session 2. The details of the conclave are given below:

Inaugural Session

Dr. Manish Kumar Jindal, CEO, NABET, began his address by talking about structured funding and evolution of education system as two important pillars of education. The structured mechanism of NGOs assisting quality and quantity of education delivery system in terms of outreach, inclusion and funding system (through government or corporates). He further elaborated that aim of the conclave is to chart out the impact assessment by identifying the gaps and providing solutions to overcome it. The idea is to formulate different methodologies region-wise and to measure the institutionalised effort to reach the set goals.

Ms. Madhu Ahluwalia, Senior Advisor, QCI, underlined the significance of education as fundamental rights highlighting the economic fallout during pandemic and role of CSR funding in strengthening education system and awareness generation. With the amendment in CSR rules, the focus has been shifted from expenditure to impact. Further, in her address, she expressed a gratitude to the eminent speakers who agreed to share their knowledge and experience in the conclave from their respective domains.

Technical Session 1

Ms. Madhu Ahluwalia, introduced the session 1 i.e., "Strengthening the Education Ecosystem through CSR". Therefore, the session aimed to gauge perspectives of functionaries from CSR who are directly involved in education projects to assess the need and challenges involved in executing education CSR initiatives while enhancing accountability and transparency.

After setting the context, Ms. Madhu Ahluwalia welcomed session chair Mr. P.R. Mehta along with session speakers namely;

- Mr. Vivek Prakash, Vice President & Head – CSR, Jubilant Ingrevia
- Ms. Smita Agrawal, Director, CSR, Tata Steel
- Ms. Anupam Nidhi, Head CSR, Hindustan Zinc
- Mr. Ritesh Sinha, Head CSR, HDFC
- Dr. Sheela Raghavan, Principal (Former), Trainer & Assessor.

Technical Session 2

Ms. Madhu Ahluwalia, introduced the session 2 i.e., "Exploring Synergies and Co-Creating Solutions" to the participants

stating that NGOs have been taking up regular initiatives as a testament to the collective articulation of social responsibility towards improving quality of education in the country. However, the aspect of effective measurement of implemented projects is somehow not addressed. An independent view to check on aligned strategies, planned activities & outcomes may create quality ecosystem in the entire structure of project implementation. She elaborated that the session aimed at bringing perspectives of various stakeholders and recommended relevant suggestions on assessment of outcomes of implemented projects.

After setting the context, Ms. Madhu Ahluwalia welcomed the speakers namely;

- Mr. Daya Ram, Secretary, Aspire
- Ms. Radhika Suri, Director, WWF-India
- Mr. Girish Ananthanarayanan COO and Director-Scale Programmes, Peepul
- Mr. Ravi Rebbapragada, Chairperson - Working Group on Tribal Area Governance –PESA
- Mr. M Abdu- Principal, Calicut Girls Vocational School, Kerala
- Mrs. Manju Balasubramanyam, Principal, DPS North, Bangalore

Outcome of the deliberations: Based on the deliberations in technical session 1 & technical session 2 in the conclave, it emerged that:

1. Independent assessment is an effective method to improve the systems and involvement of right body is crucial who has the capacity to scale, capability to implement, subject expertise to set the context & reflects credibility.

2. NABET may support in impact assessment studies, framing of standards, metrics for measurement, etc. in collaboration with NGOs/ CSR.

Digital Awareness Workshops

Preparing Schools for Transformative School-Based Assessment (SBA) of Learning vis-à-vis NEP-2020:

- Module I: Understanding Holistic Progress Card (HPC)
- Module II: Transformational Changes in SBA for HPC
- Module III: SAFAL[1] & NIPUN[2]

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

- Enhancing understanding on Holistic Progress Card through Hands on Training
- Professional Development programmes to understand SAFAL, NIPUN, transformational changes in school-based assessment

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 Gaurang Tiwari (Accreditation Officer, NABET)

1 SAFAL: Structured Assessment for Analysing Learning
2 NIPUN: National Initiative for Proficiency in Reading with Understanding and Numeracy

Digital Awareness workshops on Accreditation Standard for Quality School Governance

FEED-NABET conducted Digital Awareness workshops on Accreditation Standard for Quality School Governance to spread awareness about the Standard.

The program was designed for: Management Committee Members, Education System Coordinators, Teachers / School Administrators (Core team members), Principals, Educationists / Curriculum Developers and Education Consultants who wish to implement Accreditation Standard for Quality School Governance in the schools.

Key takeaways of the programme:

- Implementation of the requirements of accreditation standard
- Understanding the best practices: benchmarking and innovation
- Facilitation to prepare a Road map for accreditation

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor, NABET)
- Dr. Sheela Ragavan
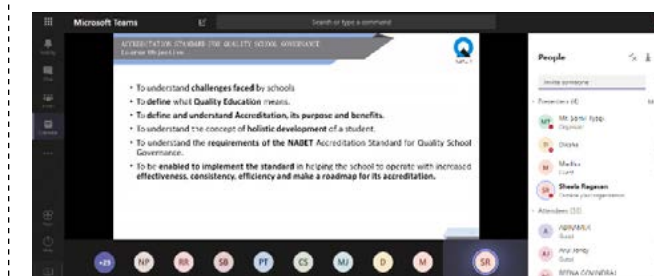
Awareness about various components of Accreditation Standard for Quality School Governance by NABET

FEED-NABET conducted workshops on components of Accreditation Standard for Quality School Governance. Various accredited and non-accredited schools participated in the workshops.

The program was designed for:

School Stakeholders

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor, NABET)
- Dr. Sheela Ragavan

WORKSHOP TITLE

Digital Awareness workshops on Statutory & Regulatory Requirements

FEED-NABET organized an 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.

Key takeaways of the programme:

- Understanding meaning of Statutory & Regulatory compliances.
- 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

Environment Division

1. **Meeting with Industry Associations regarding Post EC Compliance & Monitoring on 17 November 2021**
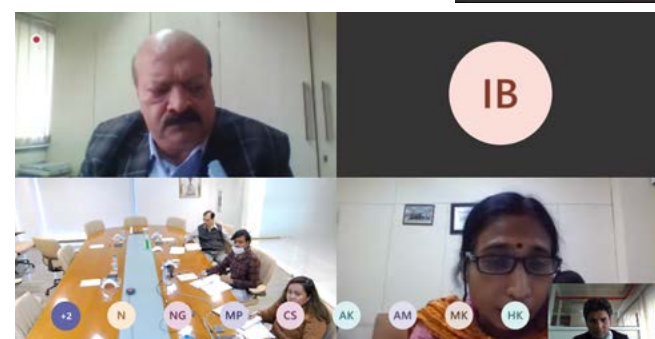
2. **Launch of web portal for the scheme of Accreditation of Exploration Agencies in Mineral Sector by Hon'ble Minister of Coal, Mines & Parliamentary Affairs, Shri Pralhad Venkatesh Joshi on 23rd November 2021**

3. **Introductory meeting with the nominated members of the Accreditation Committee (AC) for AEA Scheme on 15th November, 2021**

4. **Assessors training programme and introductory meeting for the Scheme**

of Accreditation of Exploration Agencies in Mineral Sector (AEA) on 28th December, 2021

MSME Division

Webinar on: Lean Digital Transformation was organised on 20th November 2021 with 29 participants with a main focus on

- Making business processes smarter
- Automating repetitive business tasks
- Automating manufacturing processes
- Developing more intelligent services

STS Division

Ranking and Grading of Polytechnic, Odisha: Training for Principals and HoDs of 156 polytechnics under SCTE&VT Odisha on 22nd December, 2021

nabcb.qci.org.in

National Accreditation Board for Certification Bodies

Updates from October to December 2021

NABCB signs Accreditation Body Cooperation Agreement with FSSC 22000 Foundation

NABCB has signed an Accreditation Body Cooperation Agreement with Foundation FSSC on 17th November 2021 to facilitate technical cooperation between the two bodies, and to ensure that FSSC 22000 certification scheme requirements are met during the accreditation process. The FSSC 22000 Certification Scheme is managed by Foundation FSSC and governed by an independent Board of Stakeholders, consisting of representatives from several sectors in the food industry. FSSC 22000 distinguishes from other food safety certification Schemes because of its focus on certifying the Food Safety Management System of an organization. FSSC 22000 certification is recognized by International Accreditation Forum (IAF). The FSSC 22000 Scheme sets out the requirements for Certification Bodies, Accreditation Bodies, and Training Organizations to develop and implement its operations for auditing and certification of food safety management systems of an organizations within the entire food supply chain. The issued certificate confirms that the organization's food safety management system is in conformance with the Scheme requirements and that the organization can maintain compliance with these requirements. FSSC 22000 Foundation intends to have such formal Agreements with all Accreditation Bodies which are signatory to the International Accreditation Cooperation (IAF) MLA.

Mutual Recognition Arrangement (MRA) Certificate

In accordance with ISO/IEC 17011:2017 and the procedures of the Asia Pacific Accreditation Cooperation Incorporated (APAC), APAC hereby confirms the following APAC Member is a signatory to the APAC MRA:

National Accreditation Board for Certification Bodies (NABCB) India

for the scopes and sub-scopes of

Scope		Date
Scope	Certification – Management systems - ISO/IEC 17021-1	07 Aug 2002
Sub-scope	Energy management systems EnMS (ISO 50003 / ISO 50001)	21 Jun 2017
Sub-scope	Environmental management systems EMS (ISO 14001)	12 July 2007
Sub-scope	Food safety management systems FSMS (ISO 22003 / ISO 22000)	26 Jun 2014
Sub-scope	Food Safety System Certification 22000 FSSC 22000 (ISO TS 22003 / ISO 22000)	30 Sep 2021
Sub-scope	Information security management systems ISMS (ISO 27006 / ISO 27001)	17 Jun 2015
Sub-scope	Medical device quality management systems MDQMS (ISO 13485)	01 May 2020
Sub-scope	Occupational health and safety management systems OHSMS (ISO 45001)	19 Dec 2018
Sub-scope	Quality management systems QMS (ISO 9001)	07 Aug 2002
Scope	Certification – Persons – ISO/IEC 17024	20 Jun 2019
Scope	Certification – Product, process and services - ISO/IEC 17065	22 May 2013
Sub-scope	GLOBALG.A.P. IFA Control Points and Compliance Criteria	18 Aug 2016
Scope	Greenhouse Gas (GHG) Validation and Verification – ISO 14065	23 May 2021
Sub-scope	ICAO CORSIA Version 1	02 Jun 2021
Scope	Inspection – ISO/IEC 17020	11 Sep 2013

Signed on behalf of APAC by:

Ms. Chang Kwei Fern
APAC Chair
Date: 30 September 2021

APAC Secretariat
PO Box 5154, South Turramurra, NSW 2074, Australia
Tel: +61 466 262 172, Email: secretariat@apac-accreditation.org
Web: https://www.apac-accreditation.org/

New Zealand Society Number: 1877392   Australian Business Number (ABN): 32 287 148 894

NABCB participates in 5th Annual Medical Device Regulatory and Quality Summit 2021

Mr. Rajesh Maheshwari, CEO NABCB gave the Keynote address in the 5th Annual

Medical Device Regulatory and Quality Summit 2021, organized on 16-17 December 2021 at New Delhi. In his address, he highlighted the national accreditation system established under NABCB and NABL, the constituent Boards of QCI, and its relevance and benefits to the medical devices industry. He provided information on various accreditation schemes as relevant and required for conformity assessment of medical devices. He also highlighted the provision of notifying NABCB accredited certification bodies for Medical Devices Quality Management Systems (MDQMS) as 'Notified Bodies' by CDSCO under the Medical Devices Rules 2017 for audits of the facilities of the medical devices manufacturers.

NABCB participates in IAF/ILAC Joint Development Support Committee (JDSC) Annual Meeting and Workshop

Mr. Rajesh Maheshwari, CEO, NABCB was invited to deliver an update and highlights of NABCB in the Open Forum at the Annual IAF/ILAC Joint Development Support Committee organized on 13-14 October 2021. In his presentation, he highlighted the Quality Ecosystem as well as the National Accreditation System in India, the international equivalence of NABCB, the various Govt. Bodies & Regulators which rely on NABCB accreditation, and the various International Capacity Building & Training Activities carried out by NABCB for APAC and SAARC. He also highlighted the NABCB Remote Assessment Policy and Procedure, and informed that NABCB has been maintaining its assessment schedule by carrying out remote assessments effectively.

NABCB participates in '8th Annual Food Quality & Safety Congress 2021'

Mr. Rajesh Maheshwari, CEO, NABCB delivered a keynote address on "The National Accreditation System – its Relevance & Benefits", and Ms. Varsha Misra, Deputy Director, NABCB delivered a presentation on Food Safety in the landscape of COVID-19 Outbreak during the 8th Annual Food Quality & Safety Congress held on 25-26 November 2021 at New Delhi.

The objective of this Food Safety Quality summit was to bring Food Regulator, F&B industry and Conformity Assessment Bodies together to share best practices in food quality and safety, and to align systems with changes in global standards and regulations.

Mr. Rajesh Maheshwari highlighted the role of accreditation in the food sector and how industry can get benefit from the internationally recognized accreditation system of NABCB and NABL. The presentation by Ms. Varsha Misra in the second session focused on the Food safety aspects in the challenging time of COVID-19, including Technical Guidelines for the prevention and control of COVID-19 in the production and operation of cold-chain foods.

Eminent speakers from FSSAI, NIFTEM, WHO, Perfetti Van Melle, Yakult, Coca Cola, Nestle, ITC and other food industry experts covered various other topics during the Food Safety Congress such as on the rising demand for clean labels in food & beverage sector, authenticity, traceability and quality, FSSAI revised product labelling requirements etc.

NABCB participates in the ITEC sponsored online Training Programme organized by ICAR-CIFT, Cochin

ICAR-Central Institute of Fisheries Technology (CIFT) organized an International E-Training Programme on 'Quality Assurance of Fish and Fishery Products' sponsored by Indian Technical and Economic Cooperation (ITEC) Programme under Ministry of External Affairs, Government of India during 16-29 November, 2021. ITEC is a flagship programme of the Ministry of External Affairs for capacity building of developing economies. About 25 participants from 13 different countries under ITEC programme participated in the above-mentioned programme. Ms. Varsha Misra, Deputy Director NABCB delivered a lecture as a resource person on the topic 'Good Aquaculture Practices (GAPs)'.
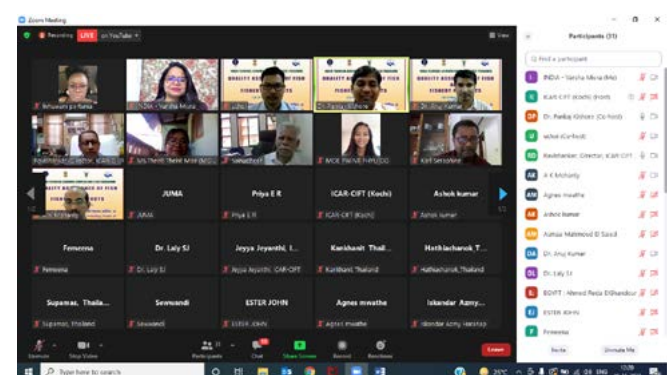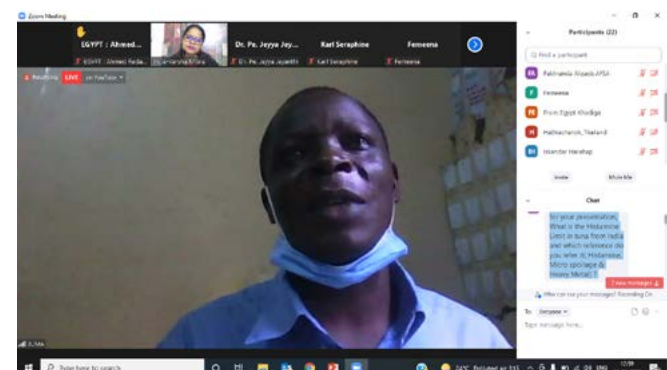
NABCB participates in "44th Session of the Codex Alimentarius Commission (CAC44)"

NABCB as a part of Indian Delegation participated in the 44th Session of the Codex Alimentarius Commission conducted virtually during 8 - 18 Nov 2021, with an additional session on 14 December 21.

During the session, various agenda items were discussed for their final adoption. FSSAI, which is the National Codex Contact Point in India, as Head of the Indian Delegation participated in discussion on various agenda Items, including FAO and WHO capacity development activities, the activities of the Codex Trust Fund (CTF), the designation of countries responsible for appointing the Chairpersons of Codex Subsidiary Bodies, matters relating to other Codex Subsidiary Bodies. More than 500 participants from more than 80 countries attended the CAC44 sessions. 15-member delegation, including representatives from NABCB, participated from India.
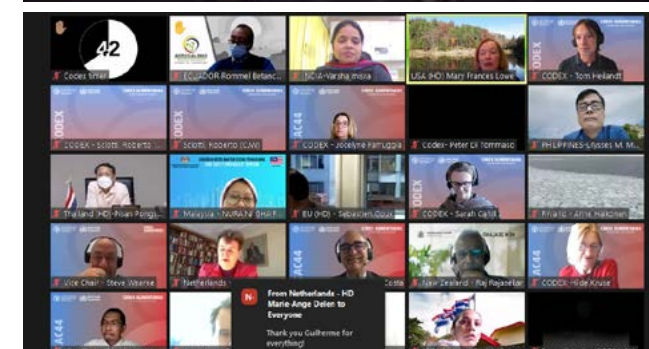
NABCB participates in APAC ABs Food Regulator Stakeholder Workshop Organized by APAC CPC

This workshop was organized by APAC Food Regulator Working Group on 9 December 2021. The Convener and Co-convener of this working group are Neil Shepherd, NATA and Kim Leighton, JAS-ANZ from Australia and New Zealand, with members from other Accreditation Bodies (ABs): IANZ – New Zealand, A2LA - USA, NABCB - India, and SCC - Canada.

This workshop had 38 participants from different ABs in the region including regulators. Ms. Varsha Misra, Dy. Director, NABCB delivered a presentation providing Insights on NABCB's various stakeholder engagement activities.

Participants in this workshop were invited to highlight and suggest ways on increasing stakeholder engagement between APAC ABs and Food Regulators in the Asia Pacific Region.

NABCB Monthly Webinars

NABCB conducted series of monthly webinars from October – December 2021 with an objective to increase the awareness about the benefits of using NABCB Accredited Conformity Assessment Bodies amongst the Government organizations, Regulators, Industry, Conformity Assessment Bodies (CABs) and other Stakeholders.

Inspection

NABCB conducted three webinars on NABCB Accreditation for Inspection Bodies and its benefits to Industry & Government Body during October - December 2021.The webinars covered a host of topics ranging from details of NABCB accreditation and its benefits, NABCB accreditation process and key requirements of ISO/IEC 17020:2012 standard. The webinars were attended by 275+ participants, including from other nations like United Arab Emirates, Saudi Arab, Tunisia, Turkey, Iran, Bhutan, Kuwait etc.

Medical Devices

Medical Devices form a crucial aspect of Healthcare Industry and have attracted significant demand over the years. In view of the same, NABCB organized a webinar on accreditation for Medical Devices Quality Management Systems (MDQMS) and Indian Certification for Medical Devices (ICMED) Scheme. This webinar provided an overview on the ISO/IEC 17021-1:2015 standard, applicable IAF Mandatory Documents and the requirements of ICMED scheme. The webinar was attended by 270+ participants, including from foreign nations like United States, Mauritius, Philippines, Kenya, Bangladesh, Qatar etc.

Quality, Environment, Occupational Health & Safety

A webinar on management Systems schemes for Quality, Environment, and Occupational Health & Safety was organized by NABCB on 26 November 2021. This webinar provided a brief overview on the ISO/IEC 17021-1:2015, applicable competence related standards, IAF Mandatory Documents. The webinar was attended by 230+ participants, including from countries like Australia, United Arab Emirates, Kuwait, Kazakhstan, Tunisia, Turkey, Oman etc.

NABCB - FSSAI Meeting with Certification & Inspection Bodies: Future Prospects

NABCB, jointly with FSSAI, organized a Virtual Meeting on 07 December 2021 with certification and inspection bodies accredited / applicant with NABCB to provide them a future prospective and to encourage them to seek recognition from FSSAI for food safety auditing as well as Hygiene Rating of FBOs.

The session started with the inaugural remarks of CEO, NABCB, Mr. Rajesh Maheshwari, followed by Keynote address by CEO, FSSAI, Shri Arun Singhal.

The meeting covered a swarm of topics ranging from Third-Party Auditing of FBOs: Future Prospects for Accredited /

Approved Bodies delivered by FSSAI, NABCB Accreditation: Pre-requisite for Certification / Inspection Bodies seeking approval from FSSAI and FSSAI Hygiene Rating Auditing Agency (HRAA) Scheme: QCI Approval Scheme for Certification Bodies. Speakers of the session were Dr. Heena Yadav Tech, Officer FSSAI; Dr. Manish Pandey, Director, PADD-QCI and Ms. Varsha Misra, Deputy Director, NABCB. Meeting concluded with interactive Q&A session . More than 100 senior management and relevant key persons of NABCB accredited / applicant certification & inspection bodies attended this meeting.
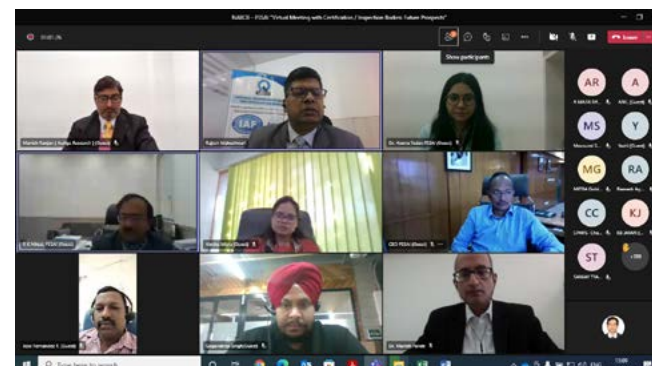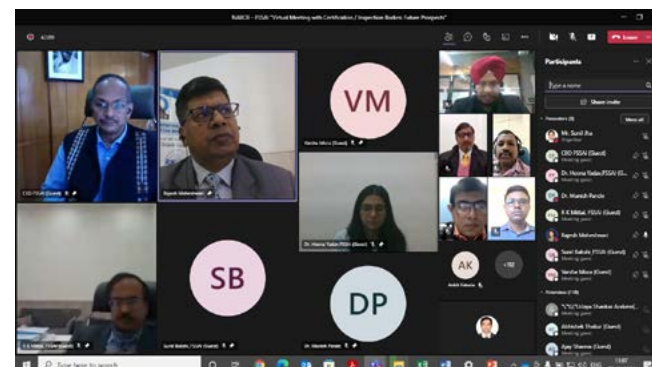
BUSINESS IMPROVEMENT CONSULTANT - REGISTRATION SCHEME OF NBQP

Objective

To serve as a consultant in various sectors in order to diligently Evaluate, Plan & Implement Improvements in business processes & practices.

Prerequisites

- Convincing insights w.r.t business process & practices
- Key content generation skills across domains
- Ability to apply decision support tools for leadership
- Strong interpersonal and analytical skills

WHO CAN APPLY

- Consultants
- Subject Matter Experts - individuals
- Business Transformation Experts/ Facilitators

Benefits for a Business Improvement Consultant

- Unique Professional Identity through Registration Certificate.
- Visibility of his/her details in NBQP website.
- Free subscription of Quarterly QCI magazine i.e. Quality India.
- Availing discount on participation fee in the Quality Conclaves, Seminars, Training Programs and Periodic events organized by QCI.
- An Opportunity to contribute Articles/Commercial Advertisements in 'Quality India' magazine.

CONTACT US For more details on the Criteria & Fee Structure, please visit: https://acr.qci.org.in/

Mr. Prasoon Misra
Assistant Director, NBQP, QCI

Mobile No: +91 -7571908641
Email: prasoon.nbqp@qcin.org

@NationalBoardForQualityPromotion   @NBQP_QCI   NBQP-National Board For Quality Promotion

nbqp.qci.org.in

National Board for Quality Promotion

NBQP

Updates from October to December 2021

Hazard Identification & Risk Assessment

9TH OCTOBER 2021

About Topic

Risk Management is a framework and a set of tools to systematically eliminate or reduce the risks of injury associated with the hazards in our work. The goal is ZERO injuries - this requires Mastering Prevention and requiring Risk Management.

The elements of managing risk is the bedrock of getting HSE right. Recognizing and characterizing hazards requires deliberate and systematic effort, but it is doable, based on ordinary life experience and knowledge of the task and its environment. Risk can be judged accurately, if not precisely, based on common sense, trained by personal/organizational experience. Control Measures can be designed commensurate with risks.

Objective & Key Takeaways

Understanding the principles of Hazard Identification, Risk Assessment and Job Safety Analysis.

Course Content

This session demystifies the approach to Risk Management by

- Recognizing (identifying) Hazards
- Assessment of Risk associated with Hazards
- Implementation of Risk Control Measures

Attended by 145 Participants

Open-House Online Training Program Title: Workshop on HACCP - Validation and Verification

29 OCTOBER 2021

About Topic

In food industries, HACCP team members have their own difficulty on making the specific documents on CCP validation and verification in their HACCP plan. This workshop will help to attain clarity on CCP validation and verification process and its effective implementation and will help to improve the food safety of the product.
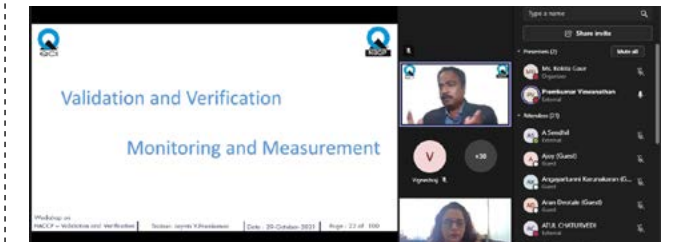
Objective

- To create awareness on HACCP Plan
- To create awareness about HACCP in food safety
- To create awareness about HACCP Implementation and its effectiveness

Key Takeaways

- Know more on HACCP principles
- Qualify in verification and validation process
- More clarity on PRP, OPRP and CCP
- Ensures you are compliant with the law
- Effective way of monitoring and measurements for CCP
- Understanding on CCP limits
- More focus on PRP and control measures

Attended by 33 Participants

"Cleanliness through 5 S" Under Swachchata Pakhwada

13TH NOVEMBER 2021

About the Topic

5S is a workplace organization method to "sort", "set in order", "shine", "standardize", and "sustain" to organize a workspace 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.

Objectives & Key Takeaways

- The 5S methodology has expanded from manufacturing and is now being applied to a wide variety of industries. Visual management and 5S can be particularly beneficial to many industries to reduce waste.

- The webinar would motivate all to take a step towards Cleanliness through Cleanliness, Arrangement, Neatness, Discipline & Orderliness.

Attended by 90 Participants

Awareness session on Food Hygiene and Quality" Under Swachchata Pakhwada

15TH NOVEMBER 2021

About the Topic

Session on food hygiene was a knowledge sharing forum for all the stakeholders by creating awareness and knowledge of food hygiene to enable them to: - understand the importance of product information; - make informed choices appropriate to the individual; and prevent contamination and growth or survival of foodborne pathogens by storing, preparing and using it correctly.

Content including an overview about principal of safe food, processes for making food safe, need of safe food, common health concerns, contamination hazards and importance of Food Hygiene.

Objectives & Key Takeaways

- To Describe the basic principles of food safety;

- To State the need and importance of safe food;

- To List out the food hazards;

- To Describe the principles and methods for food hygiene and safe food

Attended by 75 Participants
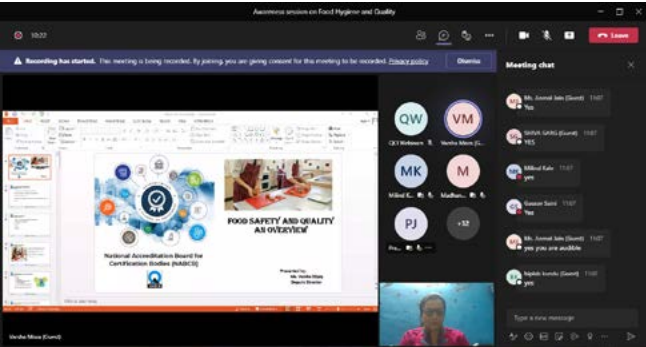
Holistic Cleanliness and wellbeing

15TH NOVEMBER 2021

About the Topic

Clean mind and soul should also be certainly attained to become a good human being. It can be achieved with good thoughts, good words and good deeds. By practising purity of mind and soul, we gradually move towards divinity. Hence the saying 'Cleanliness is next to Godliness'.

Objectives & Key Takeaways

In traditional Indian wisdom, Swachchata is beyond the obvious cleanliness. It is an over-imposing term which encourages cleanliness of thoughts, mind and good health. Physical cleanliness can keep us from getting sick from the germs that are always present in the physical world. But Spiritual cleanliness can keep us safe from the lure and temptations of sin that surround us throughout our lives which eventually leads to healthy state of mind and therefore healthy living.

Attended by 100 participants

5S Audit & Implementation (2 Batches)

18TH & 25TH NOVEMBER 2021
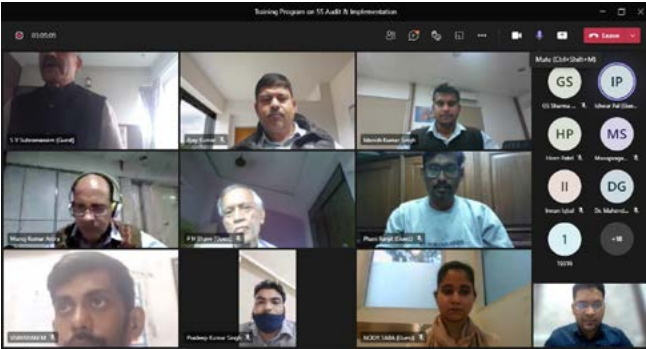
About the Topic

Five S is the starting point of any improvement journey. It is the foundation on which the Operational Excellence journey starts. Five S is a systematic way to improve workplace organization and functioning by establishing the basic conditions that are essential for improvements. It is difficult to make improvements or approach world-class levels of operations with work areas that are poorly organized, unclean, unsafe, and not standardized. Apart from this, Five S is often a good way to familiarize people with continuous improvement by involving and engaging them to improve workplace conditions and organization.

Course Content

- Five S Basics

- Detailed explanation on all 5 steps of Five S

- Examples of Five S implemented in various organizations

- How to implement Best in Class Five S

- Customizing Audit Check list for Functional areas to help Organizations to understand and improve the Five S Status

- Developing Digital Standards for Five S

- Taking Systemic Action to implement Five S

Attended by 72 participants

MS Excel- "Save Time & Improve Productivity"

27TH NOVEMBER 2021
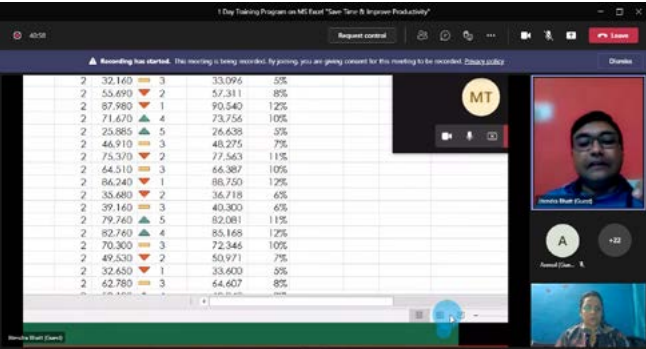
Course contents This workshop has given participants a deep understanding of the advanced Excel formulas and functions that transformed Excel from a basic spreadsheet program into a dynamic and powerful analytics tool.

Objective and Takeaway

While most Excel courses focus on simply what each formula does, this session 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. It has not only trained the participants to regurgitate functions and formula syntax; It also teaches them how to THINK like Excel.

Attended by 55 Participants

Introduction to 7 Basic Quality Control (QC) Tools (2 Batch)

10TH & 15TH DECEMBER 2021

Brief About the Program

In today's scenario, when the entire economy is reeling under

pressure due to ongoing pandemic, the usage of Quality Control (QC) tools becomes very crucial to sustain in the competitive market, where continuous improvement of all levels of an organization is a must.

So, Quality Control tools need to be implemented to reduce Manufacturing Cost, to improve quality and to reduce Lead time in the industries.

Objectives & Key Takeaways

QC tools are building block for any Quality Improvement project and resources at all levels should have correct understanding of data for doing analysis which leads to improvement in the process. The industry demand for QC tools is on rise. Webinar is designed to empower participants to solve problems and carry out improvement projects in systematic, fact-based approach.

Key Learnings in bullet points

- Importance of QC tools
- Understanding of 7 Basic QC tools using excel
- Selection of right set of QC tools
- Recording and analysis of data
- Understanding of Pareto chart
- Defects reduction and Optimization of production
- Identification of root cause through Fish bone diagram
- Quality improvement by reducing PPM level
- Process improvement
- Ways to Reduce variation
- Customer Delight
- Practical examples from various industries
- Problem solving techniques using 7 QC tools

Quality Management and Sustainable Development

29TH DECEMBER 2021

About the Program

The two domains of Quality Management and Sustainable Development: overlaps, commonalities and differences

- Need for integration across the above two domains
- Conceptual frameworks and practical examples illustrating extent to which the two domains are integrated

Program Objective & Key Takeaways

Enable participants to develop a perspective on enriching Quality Management with Sustainable Development imperatives and incorporate it into their professional work.

Attended by 175 Participants

Analytical Quality Tools/ Techniques and Technology for Improving Business Performance

About the Program

The objective of the program was to understand the fundamentals of Quality improvement in business.

Key Takeaways

- How is quality important in improving business performance?
- Current approaches for building quality in business?
- Tools and techniques for quality improvement?
- Best practice examples of application of tools & techniques.
- About QCI Quality Awards

The program was conducted in collaboration with the following organizations/chambers

S.No.	In collaboration with	Date
1	Doddaballapur Industries Association	25 Nov' 21
2	Asha Hospital, Nagpur	13 Nov' 21
3	National Institute of Food Technology Entrepreneurship and Management	4 Dec' 21
4	Indian Industries Association	6 Dec' 21
5	Tata motors Ltd	29 Nov' 21
6	Kumaon Garhwal Chamber of commerce of Industry	15 Nov' 21
7	Women's Indian Chamber of Commerce & Industry	18 Dec' 21
8	Consumer Electronics Appliances Manufacturing Association	22 Dec' 21

Prof. S.K. Joshi Laboratory Excellence Award Application Process

9TH, 22ND & 29TH DECEMBER 2021

About the Program

The objective of the program was to throw light on the application form requirements and discuss the queries of the prospective laboratories applying for the Award.

Key Discussions

- About the Award
- How to apply for this Award
- The various section of the Award Application Form
- Important Checkpoints before submitting the Award Application Form
- About the Award Assessment process
- Q&A

Attended by 471 Participants

ISO 9001 Implementation at National Institute of Open Schooling (NIOS)

The National Institute of Open Schooling (NIOS), formerly known as National Open School (NOS), was established in November, 1989 as an autonomous organisation in pursuance of National Policy on Education 1986 by the Ministry of Education (MOE), Government of India. NIOS is providing a number of Vocational, Life Enrichment and community-oriented courses besides General and Academic Courses at Secondary and Senior Secondary level. The National Institute of Open Schooling (NIOS) provides opportunities to interested learners by making available Courses/Programmes of Study through open and distance learning (ODL) mode.

QCI/NBQP had been entrusted upon the task to implement ISO 9001:2015 Quality Management Systems at NIOS. The implementation Activities were completed by QCI/NBQP successfully and NIOS has been certified for ISO 9001:2015 Quality Management Systems in Nov '2021.

VIRTUAL QUALITY CONCLAVE (VQC)

15th Virtual Quality Conclave

1ST OCTOBER 2021

Theme: Bridging gap between CSR & NGO – An initiative towards achieving sustainable development quality education goal (in association with National Accreditation Board for Education & Training (NABET)).

About the Conclave

The 15th VQC was organised to highlight the importance of role of Corporates and NGOs towards achieving one of the key Sustainable Development Goals (SDG) which is to provide Quality Education to all. The primary objective of the conclave was to iron out the existing gaps and develop a roadmap for Corporates and NGOs in India to strengthen the ecosystem required for delivering Quality Education.

The conclave included two sessions

"Session 1: Strengthening the Education Ecosystem through CSR" and "Session 2: Exploring synergies and co-creating solutions" with deliberations around the following topics:

- CSR mandate as an opportunity rather than onerous compliance
- Exploring new avenues for smart & efficient collaboration with NGOs to strengthen the Quality Education Ecosystem

- Need for Robust Evaluation & Monitoring of CSR Initiatives
- Measuring impact: the success of CSR
- CSR as an investment not an expenditure

The inaugural Session was addressed by Shri P.R. Mehta, Interim Chairman NABET & Chairman, NABET Skill Training and Service Division Technical Committee; Dr. Manish Jindal, CEO-NABET and Ms Madhu Ahluwalia, Senior Advisor, NABET.

The Conclave witnessed enriching deliberations from 14 speakers and was attended by 160 participants.

16th Virtual Quality Conclave

27TH OCTOBER 2021

Theme: Accreditation: Supporting Quality Infrastructure (in association with NABL))

About the Conclave

The 16th VQC was organised on the significance of accreditation of conformity assessment bodies towards achieving the Sustainable Development Goal (SDG) of Good Health and well-being. The primary objective of the conclave was to apprise the Government/ Regulator/ Industry/ manufacturer/ end-consumers about the significance of accreditation towards strengthening the quality infrastructure of the country by ensuring accuracy and reliability of results.

The conclave included two sessions

"Session 1: Accreditation: formal recognition of competence of a laboratory" and "Session 2: Accreditation: Testimonial for patient safety and prognosis" with deliberations around the following topics:

- Accreditation: A step toward quality
- Accreditation: Complying to international standards
- Accreditation: Process and requirements
- Accreditation: Inculcating quality

The inaugural Session was addressed by Prof. Bejon Misra, Chairman, Consumer Affairs and Public Health Committee PHD Chamber; Mr. N. Venkateswaran, CEO-NABL; Mr. C.K. Biswas, CEO-NBQP and Iti Saxena, DD, NABL.

The Conclave witnessed enriching deliberations from 13 speakers and was attended by 332 participants.
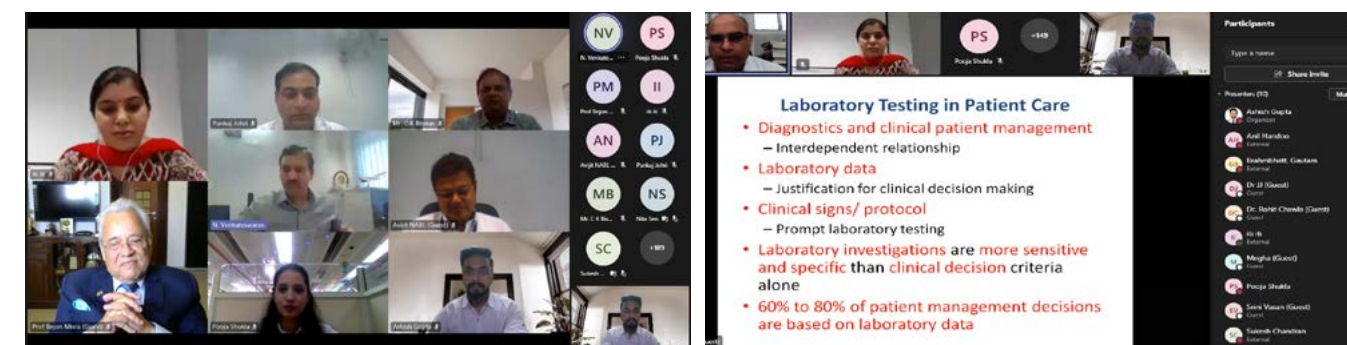
17th Virtual Quality Conclave

23RD NOVEMBER 2021

Theme: Quality Management, Registration/Certifications & Licenses for Entrepreneurs/Start-ups (in association with association of Lady Entrepreneurs of India (ALEAP INDIA))

About the Conclave

The 17th VQC was organised with a focus on Quality management systems for business organisations, especially small and medium-sized businesses, as it is one of the major factors affecting entrepreneurship success and ultimately sustainable development of firms, industries and countries.

The primary objective of the conclave was to discuss about how Quality management ensures how an organization's product or service is delivered defect free consistently. The conclave was built around four main components: quality planning, quality assurance, quality control and quality improvement.

The conclave included two sessions

"Session 1: Quality management for Entrepreneurs/Start-ups" and "Session 2: Registrations and Certifications (Trading, Import and Export)" with deliberations around the following topics:

- Importance of Quality Management for businesses

- Product Quality and service quality and means to achieve them

- Quality assurance and control of processes in products and how to achieve more consistent in quality

- Requirements of registrations/certifications and Licences for start-ups

The inaugural Session was addressed by Ms. Reena Jha Tripathi – Chief Commissioner of Income Tax – Mumbai; Ms. K. Rama Devi, President - ALEAP India and Mr. C.K. Biswas, CEO-NBQP.

The Conclave witnessed enriching deliberations from 12 speakers and was attended by 401 participants.

18th Virtual Quality Conclave

27TH NOVEMBER 2021

Theme: NextGen Quality (in association with American Society for Quality (ASQ))

About the Conclave

The 18th VQC was organised to bring an awareness on Quality 4.0 which is transforming the nature of work and the workplace itself. This has led to new challenges and opportunities, for example, the employees need to acquire new skills and effective ways to integrate the people, process, and technology of their organizations into an overall digital transformation strategy wherever they may be on their transformation journey.

As the promise of Quality 4.0 has yet to be fully realized, but recent successes in efficiency, customer satisfaction, financial performance, and corporate culture point to a promising future for quality organizations on their journey to embrace it and the conclave brought meaningful deliberations around the same. The conclave also aimed to increase the understanding and awareness on the current state of Quality 4.0 adoption, and what it means for the organizations, teams, and future for quality professionals.

The conclave included two sessions

"Session 1: Will Quality professionals still be required as automation gains ground? Software Quality for Industry 4.0" and "Session 2: CXO's Panel Discussion on NextGen Quality in the Context of People, Process and Technology with deliberations around the following topics:

- Learn application of Quality 4.0-enabling technologies including IoT, machine learning, data processing, AI and automation for quality improvement.

- Review processes, tools and techniques applied in Quality 4.0 initiatives, encompassing change management, the increased use of digital tools, advanced analytics and the effective application of data and data analysis for operational excellence.

- How quality professionals can be an effective voice that makes case for quality in transformation initiatives.

The inaugural Session was addressed by : Prof Prem Vrat, Pro-VC, The NorthCap University; Dr Prabhat Kumar, Lawyer, AI & Technology Consultant; Mr Ciby C James, Technical Advisor, ASQ and Mr. C.K. Biswas, CEO-NBQP.

The Conclave witnessed enriching deliberations from 12 speakers and was attended by 274 participants.

IMPLEMENTATION OF ISO 50001 ENERGY MANAGEMENT SYSTEMS: TNPL UNIT- 1

Tamil Nādu Newsprint and Papers Ltd. (TNPL) was promoted by the Government of Tamil Nadu to produce Newsprint and Writing & Printing Paper with Bagasse (Sugarcane residue) as the main raw material. The mill was established in Kagithapuram, Karur district, Tamil Nadu in October 1985. TNPL is one of the most eco-friendly paper mills in the country. From raw materials to final product (Paper) and beyond, TNPL gives precedence to conservation of both resources and environment. TNPL UNIT-I operates with 3 state-of-the-art paper machines with a production capacity of 4,00,000 MT per annum Writing & Printing Paper. Besides that, TNPL established one Multi-Layer Coated Board Machine PM#4 in TNPL Unit - II with capacity of 2,00,000 MT per annum of Paper Board in Feb' 2016 at Trichy district.

Case Study

To support the paper production TNPL Unit 1 operates 300 MT/day modern Hard Wood fibre line with Super-batch cooking, Oxygen Delignification 900 MT/day cement. The Mill is rapidly moving away from linear economy and traveling towards circular economy to conserve the natural resources and to protect the environment.
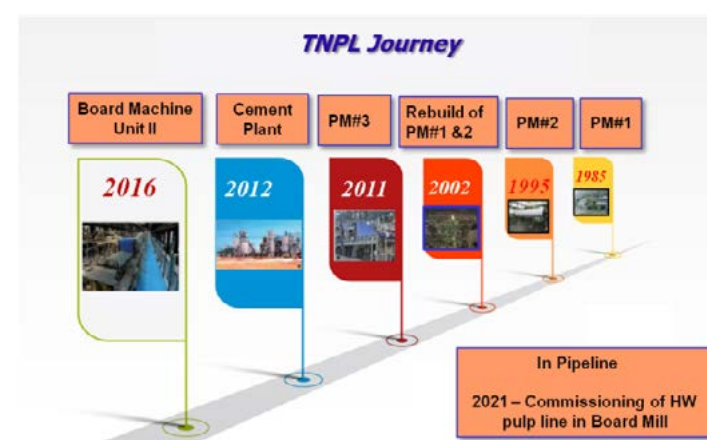
followed by Elemental Chlorine Free (ECF) bleaching sequence and a 500 MT/day continuous cooking and ECF Chemical Bagasse bleach plant, and 1300 MT/day black liquor solids firing chemical recovery boilers. TNPL has also set up a Deinking Pulp Line of capacity 300 MT/day dedicated to recycling waste paper.

By effectively utilizing the wastewater organics, to generate biogas and use in Lime Kiln to save fuel oil, the mill contributes to greenhouse gas emission reduction and climate change. TNPL closes the loop by reusing and recycling of water and wastewater in the process and inorganic solids to produce

In the energy island, three low pressure boilers were replaced with a new energy efficient and environment friendly Circulating Fluidized Bed Combustion Boiler of 125 tph steam generation capacity at pressure of 105 ata. In addition, two old Turbo Generators (TG) with a total capacity of 18.5 MW were replaced with a new high efficiency 41 MW TG and to meet the additional energy requirement by improving the energy efficiency. The mill operates a total 103.6 MW capacity captive power plant in TNPL UNIT-I for in-house consumption and 35.5 MW off site windmill for export to grid.

NEED FOR ISO 50001 ENERGY MANAGEMENT SYSTEM (EnMS)

ISO 50001 EnMS is a model of continual improvement, similar to other well-known standards, such as, ISO 9001 or ISO 14001 (already implemented in TNPL). The ISO 50001 EnMS standard is a proven framework for industrial, commercial and service facilities to manage energy including all aspects of energy procurement and use. ISO 50001 EnMS establishes the structure and discipline based on, well known plan-do-check-act approach, to implement technical and management strategies that significantly cut energy costs and associated greenhouse gas emission and to sustain those savings over time and improve upon.

TNPL ISO 50001 EnMS IMPLEMENTATION ROADMAP

TNPL Unit -1 was selected to implement the ISO 50001:2018 EnMS by Bureau of Energy Efficiency (BEE) as one of the public sectors designated consumer entity under PAT scheme. Considering the advantages / necessity to have better efficiency in energy performance and management, TNPL entered into an MoU with BEE for implementation of the EnMS in October 2019. Further, BEE nominated Quality Council of India (QCI) as consultant for Implementation of EnMS in TNPL Unit 1. Leader, Document Integrator and Coordinator was appointed by TNPL management on 14th December 2019. Later the Kick off meeting was held in December 2019. First and second training on Documentation were provided to TNPL Executives in January 2020 & February 2020 respectively. Subsequently, Identification of scope, formation of EnMS Team, Training on ISO 50001:2018 standard documentation, Drafting Energy Policy & Objectives were completed. Further, Apex manual and all the department manuals were completed and then Energy policy was signed by MD, TNPL on 10th August 2020 and released.

Internal Audit training program was conducted by QCI in August 2020 through online for 21 Executives from TNPL Unit –I and all of them were qualified and received certificate. First and second Internal Audits were conducted in November 2020 & December 2020 and later the Management Review meeting on 12th January 2021. Further, to fulfill EnMS requirements, Energy Conservation (Encon) Team and Energy Manager & Energy Auditor Team were constituted. Overall outline of the Energy Management System planning in TNPL Unit 1 is presented below. TNPL classified its process into four major processes viz. Pulp Mill, Paper Machine, Soda Recovery Plant Power Boile and two minor processes (WTP and ETP) and all miscellaneous small sections are grouped as one under others to collect data and manage energy consumption. The four major processes are again sub-grouped into minor process and over all data collection is presented below.
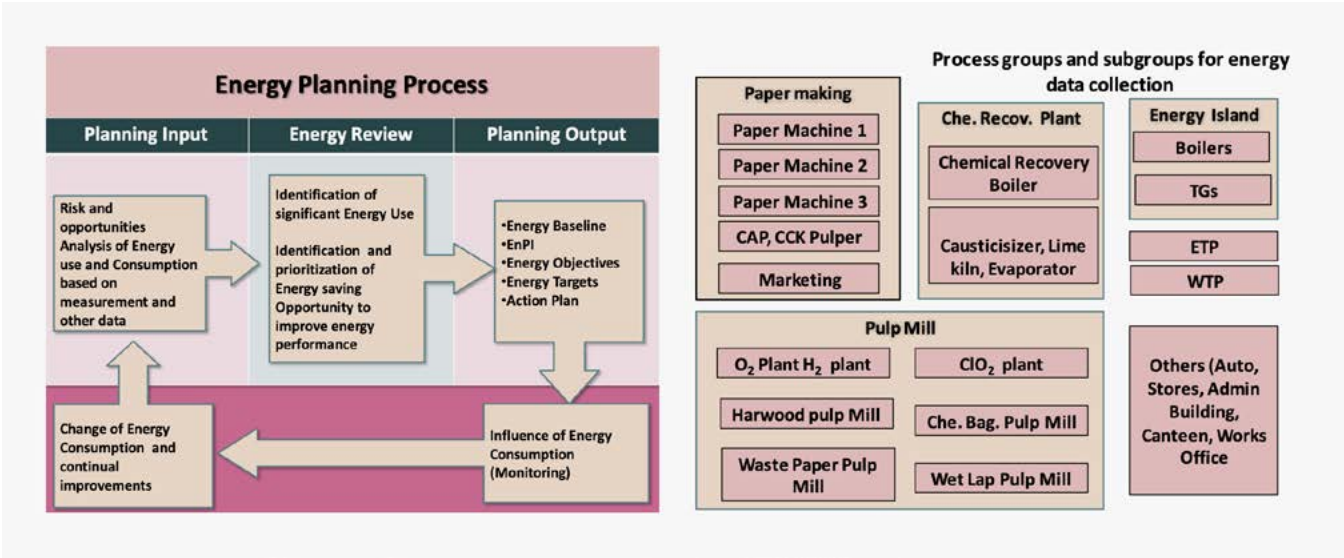
Encon team members and department leaders are responsible for collection of monthly data from individual sections and departments and also to identify Objectives & Targets, Energy Baseline, Significant Energy Use, Specific Energy Consumption/ Energy Performance Indicators, Future Energy use etc. as per the standard.

M/s TUV India PVT LTD was selected and conducted stage I and stage II certification audit and successfully completed in February 2021 and March 2021 respectively. TNPL Unit-I received EnMS ISO 50001:2018 certificate from TUV Nord GMBH, Germany. The certificate is valid from 25 March 2021 to 24 March 2024.
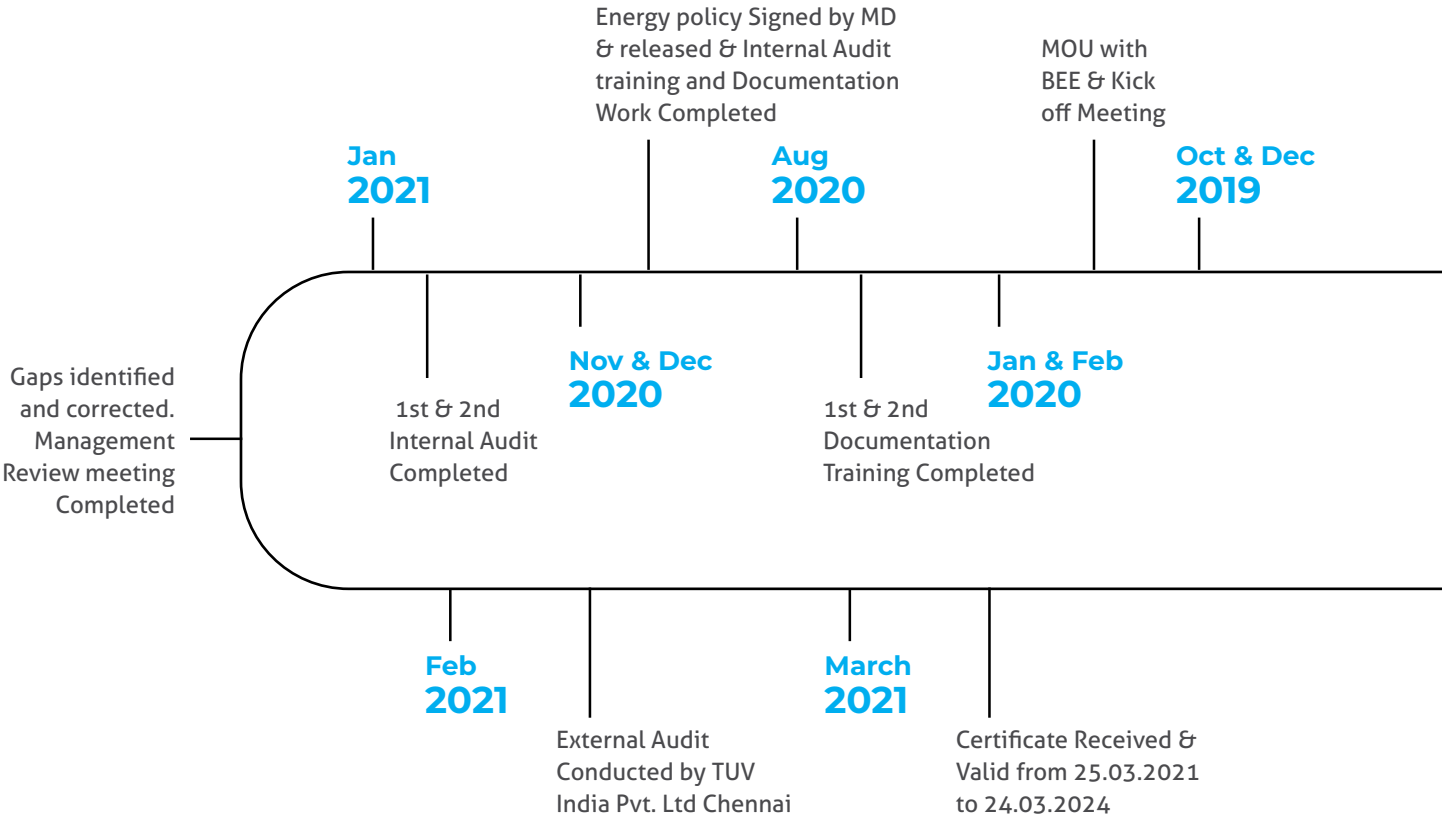
BEST PRACTICES ADOPTED

Raising energy and chemical costs and stringent environmental regulations force industry to improve its process efficiency to conserve resources and minimize waste. Hence, improving energy generation and chemical recovery in the soda recovery island become a critical economic factor in integrated pulp and paper industry.

Kraft Pulping cycle is based on combination of heat and chemicals to convert the fibrous raw materials into fibre suspension called pulp for use in papermaking. It carries three major functions, apart from producing pulp, viz. reducing environmental impact of black liquor, recycling pulping chemicals (NaOH and Na2S) and co-generating steam and power. Black liquor is one of the important byproducts generated in the Kraft Pulping process and it is used as a major source of renewable fuel in paper industry to generate steam. Therefore, improving recovery boiler efficiency would contribute positively to energy saving and pollution reduction and also help paper industry to travel towards Net Zero emission target.

A project was identified and implemented to improve performance of our chemical recovery boiler using black solids from the pulping process which is predominantly using agro-based fibrous raw material.

In TNPL, a unique combination of splash plate nozzle liquor gun and swirl cone nozzle liquor gun arrangement was innovatively designed and implemented in the recovery boiler in place of only swirl cone nozzle liquor gun. The system is implemented first time in Agro-Based Integrated Pulp and Paper Mill. The

Chemical Recovery Boiler

benefits include additional steam generation of 0.15 MT/MT of BLS fired that works out to around 60,000 MT steam per annum equivalent to 1,99,326 GJ energy resulting in saving of Rs 59.8 million besides additional recovery of Sodium Sulphide and improvements in environmental performance.

BENEFITS OF IMPLEMENTING ENERGY MANAGEMENT SYSTEMS

- Computation of energy baseline and specific energy use (Energy Performance Indicator) at department and section level

- Collating, Recording and Monitoring of energy data in micro-level on a regular basis

- Identification of significant energy use and energy objectives and targets at micro-level

- Organized structure with roles and responsibility for energy management and energy performance improvement through identification and implementation of energy saving project

- Improved awareness on energy management and performance improvement among employee and other stakeholders

- Regular appraisal of energy performance to management through management review meeting

- In addition to implementation of "combination of splash plate nozzle liquor gun and swirl cone nozzle liquor gun" many small energy saving projects were implemented. This is expected to save around 2.00 Lakh GJ of energy per annum

ZED®
ZERO DEFECT • ZERO EFFECT

Updates (October – December, 2021)

MSME Sustainable (ZED) Certification, Ministry of MSME

- ZED Scheme and its various features presented to Hon'ble Minister of MSME

- A 3-member PMU is continuing at O/o MoMSME for finalisation of the incentives for the ZED Scheme and for supporting in various other activities of the Ministry

- The Ministry has been proposed to include MSME KAWACH (COVID-19 support) for MSMEs on the lines of the WASH Standard

- ZED Scheme guidelines approved by Standing Finance Committee (SFC)

- Organized various meetings with Financial Institutions (like Bandhan Bank, Trans Union CIBIL) to explore incentives and API integration

- Organized various meeting with States/UTs to explore incentives, inclusion of ZED in industrial policies and API integration wherever possible

- ZED Certification Scheme publicized at the Trade Fair 2021

WASH (Workplace Assessment for Safety & Hygiene) Scheme

- **Assessments (Total Applications Received: 550+, Total Assessment Conducted: 515)**

  List of Assessed Organisations (Government and Private) under WASH Scheme is available at https://docs.google.com/spreadsheets/d/1OP2gL5jjn4L3eyl0WTWslLyoeHYGFJsw03En5wvAaVM/edit#gid=0

SAATHI (System for Assessment, Awareness and Training for Hospitality Industry), Ministry of Tourism

- **Self-Certification [Total Units Self-certified: 10959 (more than 3 lakh available rooms)]**

  For the period of September to November, 2021:

  Participating States/UTs: 18

  Number of Units Self-Certified: 120 (more than 2500 available rooms)

- **Detailed analysis available online at: https://saathi.qcin.org/**

ODOP project of U.P. Government

- Developed 'Compendium of Quality Standards' for ~167 products spread across all 75 districts as a ready reckoner for the ODOP producers and other activities

- Field visits for validation of compendium and survey have been completed

Expanding and Revamping NIDHI & Star Classification System, Ministry of Tourism

- The upscaled NIDHI website was launched by Hon'ble Lok Sabha Speaker, Shri Om Birla on World Tourism Day, 27 September, 2021, in presence of Union Minister of Tourism, Culture & DoNER, Shri G. Kishan Reddy and MoS for Tourism, Shri Shripad Yesso Naik

- 5th Taskforce meeting conducted to finalize the recommendations (Registration forms, Definition of hospitality & tourism categories, showcasing forms, Unique ID formats, Room type definition, Classification/Approval process flow) submitted to MoT by QCI

- Registration forms are live for six tourism categories (Accommodation unit, Food Business Operators, Tourism Service Providers, Online Travel Aggregators, Convention Centres and Tourism Facilitators)

- Recommendations for digitalizing Star Classification (Process Flow of Star Classification, Reduced Documentation vis-à-vis Regulatory Compliances, Revised Checklist of facilities for Star Classification, Revised Marksheet for Quality etc.) and Customer Feedback Forms (Accommodation unit, Food Business Operators, Tourism Service Providers, Online Travel Aggregators and Convention Centres) submitted to MoT

- Coordinated with MoMSME for developing a comprehensive database for NIDHI

- Coordinated with OTAs such as IRCTC, Cleartrip, EaseMyTrip, Yatra, MakeMyTrip and Goibibo for signing an MoU with Ministry of Tourism and integration on NIDHI

- Coordinated with various authorities like NSDL, C-DAC, FSSAI etc. for real time verification of PAN, GST, Aadhaar and FSSAI data through API integration.

OUR DIVISION

Meeting with MSME-DIs on their role for implementation of MSME Sustainable (ZED) Scheme

NIDHI 2.0 launched by Hon'ble Lok Sabha Speaker, Shri Om Birla on World Tourism Day in presence of Union Minister of Tourism, Culture & DoNER Shri G. Kishan Reddy and MoS for Tourism Shri Shripad Yesso Naik

ODOP Field Visits

PADD

*Project Analysis &
Documentation (PAD) Division*

Updates (October - December, 2021)

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 (VCSMPP). 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.

10 GAP workshops and 3 Sensitisation workshops were organised which focused on sensitisation of farmers on Good Agricultural Practices, resulting in 52 workshops in total until date.

For meeting, the objectives of key PADD schemes viz. VCSMPP, VCSTCHP; a meeting was held with CEO, Chhattisgarh Tribal Local Health Traditions & Medicinal Plants Board. He highlighted immense scope in Chhattisgarh and offered to partner on the mentioned schemes.

A meeting with Directorate of Medicinal and Aromatic Plants Research was also held for collaborating on technical aspects of the project.

VCSMPP GAP Training Workshop in Ranchi, Jharkhand on 5th Oct 2021

VCSMPP Training Workshop in Bangalore, Karnataka on 27th Oct 2021

VCSMPP Training Workshop in Baran, Rajasthan on 10th Dec 2021

Strategic Partnership with Directorate of Medicinal and Aromatic Plants Research

OUR DIVISION

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 small holders to practice good agricultural practices in their farms.

Projects under IndG.A.P. are in the implementation stage.

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).

10 agencies have been recognized and 19 applications are under process of approval.

UAS Certification Scheme {erstwhile Certification Scheme for Remotely Piloted Aircraft Systems (RPAS)}

QCI 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 17th September 2020 in

presence of Shri Amber Dubey, Joint Secretary, Ministry of Civil Aviation.

Fourth Technical Committee meeting was conducted on 3 November 2021. Second Certification Committee meeting was conducted on 23rd November 2021. Witness assessment of TQ cert was held on 9th November 2021 and 10th November 2021.

Projects

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

An 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. 1st set of deliverables for conformity assessment framework were approved. Documents on the criteria for Level 2 and Level 3 have been submitted in the third Technical Committee Meeting.

Benchmarking Project

The promotion and marketing of

IndG.A.P. is undertaken with close engagement with APEDA through an ongoing project on Benchmarking of IndG.A.P. to GLOBALG.A.P.

Spices Board Project

The promotion and marketing of IndG.A.P. is also undertaken with close engagement with Spices Board through an ongoing project on IndG.A.P. certification of spices.

UAS Certification Scheme | Pilot projects

Stage 2 evaluation of Model V submitted by CBAI Technologies Pvt. Ltd. conducted on 9th November 2021 and 10th November 2021.

NGCMA GLP Cell

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

Audit process of a project under IndG.A.P. Benchmarking Initiative

Witness Assessment of TQ Cert Services Private Limited and Evaluation of Model V 'CBAI Technologies Pvt Ltd.' under UAS Certification Scheme

10 GLP inspections were conducted, 3 GLP scope extension, 3 new applications and 4 re-certification applications were received for GLP certification during October'21 – December'21.

Online Events

A virtual sensitisation program was conducted on 27th October 2021 on Conformity Assessment Frameworks to raise awareness amongst Certification Bodies about the diverse schemes/new initiatives of PADD, QCI.

The program witnessed 80+ participation from Conformity Assessment Bodies.

Session on 'Role of VSS in post COVID-19 Recovery'

India and Sustainability Standards Conference: Session on 'Role of VSS in post COVID-19 Recovery' was conducted with Centre for Responsible Business which saw valued participation of distinguished speakers.

Training Program on Conformity Assessment Frameworks by PADD, QCI

Project Planning & Implementation Division

Updates (October – December, 2021)

Project Planning & Implementation Division works with various Union and State Government Ministries and Departments in Monitoring, Assessment, Policy and Implementation Projects. Currently, there are 30+ ongoing projects. Some of the major highlights of the projects are as follows:

Third-Party Sampling, Testing & Analysis of Coal

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. A total volume of more than 290 Million Metric Tonnes has been sampled till December 2021. 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 seven 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 samples, Mobile applications & web portal for multiple stakeholders.

Plant End Projects of Coal

Lanco Anpara Power Limited

LANCO Anpara Power Limited (LAPL) has appointed QCI for quality analysis of coal at their thermal power plant and the ground operations commenced on 22nd January 2020. A total volume of

9.30 Million Metric Tonnes of coal has been sampled till December 2021 from the FY 2019-20.

JSW Energy Barmer Limited

JSW Energy Barmer nominated QCI to facilitate the quality and quantity analysis of Lignite fuel at their plant end and the ground operations commenced on 1st October 2020. A total volume of 13.06 Million Metric Tonnes of coal has been sampled and zero samples have been challenged till date.

Odisha Coal & Power Limited

Odisha Coal and Power Limited (OCPL) has nominated QCI for quality analysis of coal at their mine end and the ground operations commenced on 18th March 2020. A total volume of 5.30 Million Metric Tonnes of coal has been sampled till date from the FY 2019-20. With consistent performance OCPL has extended QCI's contract and scope of work.

Quality Analysis of Coal at NLC, Talabira II & III Mine End

NLCL has nominated QCI for carrying out quality analysis of coal at their mine end. QCI has signed the agreement on 12th Oct, 2021 and the operation has been commenced on 25th November 2021. A total volume of 0.19 Million Metric Tonnes of coal has been sampled till 31st December 2021.

Government e-Marketplace (GeM)

GeM PMU

QCI has been supporting GeM since 2017 with several key tasks such as Service Approvals, Vendor Assessment Exemption Validation, Research on Mandatory Compliances, Assistance with Service Level Agreements (SLAs),

Recommendations to GeM with the help of our boards NABL, NABCB and other Certification Bodies, Execution of online/ offline collaboration of GeM with Accredited Certification Bodies/ Regulatory Bodies to name a few, to ensure quality in procurement, etc. GeM, PMU has also taken multiple initiatives to support & expand GeM's operations and facilitated the implementation of the same.

GeM Vendor Assessment

Vendor Assessment by QCI assesses the authenticity of the seller as well as the products. It aims to assess the production capability and capacity, quality and after sales service of the products. It is carried out in two stages, Desktop Assessment (DA) followed by Video Assessment (VA).

GeM Re-seller Assessment

The project proposes to conduct an online Re-seller Assessment (via web module) on the GeM portal for the goods they have enlisted for assessment. The assessment focuses on the capability, OEM Authorization and financial stability to supply a product on a continual basis.

Swachh NDMC PMU

QCI PMU assists in capacity building and handholding NDMC stakeholders to streamline processes of ULB to achieve goals of Swachh Bharat Mission Urban, Swachh Survekshan, Garbage Free City (GFC) Ranking, Water Plus and Safaimitra Suraksha challenge. The team has worked with utmost dedication and focus to complete all activities and has been successful in attaining 1st Rank in 1-10 lakh population category, 5th Rank at the national level and has been awarded 'India's Cleanest Small City. NDMC has been declared GFC 5 star ranked city and Water+ certified city.

Ayushman Bharat PMJAY Quality Certification

QCI and 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. The Gold Quality Certification is the highest level of certification. The hospitals with National Accreditation Board for Hospitals and Healthcare Providers (NABH) Accreditation or Joint Commission International (JCI) Gold Standard Certification, can apply for Gold. The Silver Quality Certification is the second level where the hospitals with NABH Entry Level Certification and National Quality Assurance Standards (NQAS) can directly apply. The hospitals that do not hold any certification can apply for the Bronze Quality Certification. Due to the pandemic, we have also initiated the virtual on-site assessments for the Bronze Quality Certification. Nearly 1000+ hospitals have shown interest in the certification process from across the country. As of 5 Jan 2022, we have certified 102 hospitals with Gold, 99 hospitals with Silver, and 41 with Bronze Quality Certification. The number of applicant hospitals is increasing day by day, showing the growing importance of quality and interest in quality certification.

National Project Management Framework

The NITI Aayog led Task Force on program and project management constituted to increase efficiency in large-scale infrastructure projects

mandated by QCI, to develop the NPMPF as well as set up a National Institute of Chartered Program and Project Management (NICPP). The NICPP, under the aegis of QCI, shall house the certification in program and project management, with a focus on the infrastructure sector. The system will be based on the technical baseline of the initiative, the Indian Infrastructure Body of Knowledge (InBoK). Following the mandate, QCI worked under the guidance of the Technical Committee to develop the InBoK and Operational Framework to start certifications and train career professionals in the infrastructure sector.

Currently, the team has developed the structure for running the operations of NICPP and is working towards the completion of different verticals including portal and website development, examination system, training module development, question bank development, and other peripheral operations towards the launch and operationalization of NICPP examinations and certification.

Atal Bhujal Yojana

Central Sector Scheme with an outlay of Rs 6000 crores, covering 81 Districts, 222 Blocks & 8500+ Gram Panchayats across 7 Water Stressed States. The Scheme aims at Sustainable Groundwater Management through Community Participation, Demand-side Interventions, and Convergence of ongoing Central and State Water Schemes. QCI has been engaged as the third-party government verification agency, tasked with setting the baseline and verifying results against the 5 Disbursement Linked Indicators (DLIs) in-built in the scheme. Furthermore, the team is responsible to structure and update the protocol for carrying out the year-on-year verification for 5 years.

QCI successfully carried out the first round of verification of DLI-1 in Dec'20-Jan'21, and the 2nd round of Verification for DLI#1 and the 1st round of Verification for DLI#2 in the month of October-November, 2021. The report for the 2nd round of project was submitted on 20th December, 2021. Upon several rounds of discussions with the NPMU, and the relaxation of

verification protocols by the ministry, the assessment of 1st round of DLI#2 shall be carried out again commencing from 15th January, 2022. The collective report is to be submitted on 15th February, 2022.

CPGRAM (Centralized Public Grievance Redress and Monitoring System) Reforms, DARPG

The objective of the study is to develop a robust system for grievance redressal with an intention to reduce redressal time owing to redundant/avoidable transfers of grievances and to improve the quality of resolution of grievances. The study will look at streamlining the CPGRAMS portal with the purpose of mapping grievances to the concerned redressal officer by circumventing the line officers in the system and restricting their role to advisory/supervisory. QCI team has successfully completed all 20 ministries mentioned in the contract with DARPG and submitted to NIC for incorporation. QCI has successfully been empanelled by DARPG for 20 more ministries (e.g. Women and Child Development, Ex-servicemen Welfare etc.), to be reformed under CPGRAMS 7.0 version starting January 2022. Additionally, the team will work on the grievance data and analyse it to identify gaps in the CPGRAMS 7.0.

DARPG Special Campaign – Swachhata Assessment

QCI team was empanelled by DARPG as a TPGVA for the Special Campaign – Swachhata Assessment. The assessment was based on parameters like cleanliness, grievance pendency, spaces freed upon files being weeded out, and their planned utilization. QCI team inspected the office premises of 82 Ministries/Departments.

These Ministries/ Departments were assessed in a period of 4 days from the 9th November 2021 to 12th November 2021. A team of two QCI professionals visited each Ministry/Department as per the prepared schedule to carry out the assessment. After completing the assessment, QCI team formulated Ministry/Department wise detailed report. Based on this, a document for the best practices across these 82 Ministries/Department was shared with DARPG, along with the final compiled report.

Third-Party Assessment of Fast Moving Products at ALIMCO, Kanpur

QCI has been associated with ALIMCO (Artificial Limbs Manufacturing Corporation) from the 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 have successfully completed the assessment in the month of October and December 2021. Now the final report of Kanpur Assessment (conducted in the second last week of December 2021) has to be submitted in January 2022, which marks the successful completion of the project for three years.

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.

National Highways Excellence Awards 2021

The awards aim to recognize companies that are performing exceptionally well in the project management, operations & maintenance, innovation, green and tolling stages of highway development as well as in the arena of road safety. After the three

successful implementations of the National Highways Excellence Awards, the Ministry of Road Transport and Highways has invited applications for the year 2021. This year two new categories have been introduced, Bridge and Tunnel Construction in the last year's 7 categories. The nomination portal was open from 19th August 2021 to 3rd October 2021. 122 nominations were received across 9 categories. A document review round was conducted for 89 eligible applications. 58 projects were shortlisted for the second round of the assessment which is field assessment.

Third party inspection of Water Supply Schemes under GOI flagship "Jal Jeevan Mission (JJM)" in the state of Himachal Pradesh

State Water and Sanitation Mission (SWSM), HP entrusted QCI to conduct the third-party inspection of the schemes executed under GoI flagship scheme Jal Jeevan Mission. JJM is a time bound program of the Ministry of Jal Shakti aimed at ensuring a functional household tap water connection to all households, supplying adequate and ample potable water. MoU has been signed between QCI

and SWSM, HP on 11th Nov 2021 at JJM Mission Director's office in Shimla. QCI is conducting inspection of all engineering works (Civil, Electrical & Mechanical), labour, safety and payments related specifics for the 62 presently allotted schemes from the district of Una, Kangra and Bilaspur. From 18th Dec 2021 QCI has started on ground inspections of the schemes under JJM in Una and Bilaspur circles.

Third-Party Testing and Analysis of added Formaldehyde in Fisheries

Government of Goa, along with Ministry of Commerce and Industry, was looking for a solution to detect and destroy adulteration of fresh fish imported in Goa using unapproved chemicals by fish traders and suppliers.

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 the state of Goa. QCI has screened around 1,22,398 fish carrying vehicles since June'19 to check the presence of added formaldehyde in fisheries.

Process Audit of In-motion Weighbridges over Indian Railways

Railway Weighbridges are the systems installed at specific locations along the railway tracks to measure the weight of loaded/empty rakes, which is further considered while deciding the price of the freight of goods being carried by the rakes. Ministry of Railways in order to identify the inaccuracy/plausible manipulation/human intervention and for increasing consistency in weighment process of loaded trains invited QCI to carry out a detailed process audit of EIMWB.

QCI was nominated by Ministry of

Railways for "Process Audit of In-motion Weighbridges over Indian Railways" on 30th March 2021 and the audit commenced from 20th September 2021. The audit is being carried out for all electronic in-motion weighbridges of Indian Railways. In total, 685 weighbridges have been audited till date.

Transformation of Food Corporation of India (FCI)

FCI and QCI have come together in March 2021 to design, develop and deploy interventions for the national

food security system to make the supply chain more transparent, technology driven and user-friendly for the stakeholders on an ongoing basis across all 36 states and Union Territories. For continuous and sustained improvement, the parties drive change by: Review and upgrading the practices, bringing the end-to-end digitization and traceability and strengthening the quality management in systems and processes. This will cover 1.35 crore farmers, 2400 warehouses, 45000 procurement centres and 540000 fare price shops.

Socio Economic Profiling of Street

Vendors under PM SVANidhi Schemes and their Families

The 'Pradhan Mantri Street Vendor Atmanirbhar Scheme 2020 (PM SVANidhi)' was conceived by MoHUA, developed with three objectives in mind: Facilitating working capital of maximum 10,000 INR, Incentivizing Regular Repayments and Digital transaction rewards to the street vendors engaged in Urban Areas as on or before March 24, 2020. In order to achieve this, SVANidhi Se Samriddhi was started with an aim towards the socio-economic profiling and scheme linkages of street vendors who are the beneficiaries of 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.

Ministry of Tourism PMU

QCI conducted a study on Travel and Tourism Competitiveness Index (TTCI) report of World Economic Forum (WEF) for Ministry of Tourism in the year 2017. We successfully submitted more than 200 action plans for various central ministries in order to improve India's ranking in the index. In extension to the study, Ministry of Tourism has appointed QCI to set up a PMU to develop an overall framework to improve India's ranking in TTCI and implement the same. The PMU is actively engaging with WEF, UNWTO, WTTC, etc. for highlighting any concerns related to TTCI and any further improvisations in the index.

RACB

Research Analysis and Capacity Building (RACB) Division

Updates (October - December, 2021)

Activities Performed

Independent Evaluation of IMPRINT-I

The division has conducted evaluation, data interpretation and impact analysis of progress reports of IMPRINT I Projects submitted by the Principal Investigators associated with institutions of

eminence in the country. The IMPRINT was launched by the President, Prime Minister and Education Minister on November 5, 2015. 17 Institutions, 10 Domains with 1 Objective i.e., "accelerating innovation & research were motivated by identifying 10 technology domain areas that could substantially impact quality, safety and security of life both in urban and rural areas".

The present work was an independent impact evaluation of projects, which was carried out keeping 50% volume of sanctioned projects. The evaluation was performed for a total of 86 high-end research and technology driven projects.

TEQIP III Scheme

RACB division, jointly with PPID, executed two very important schemes of NPIU, MoE, in the area of Technical Education Quality Improvement Program (TEQIP) of Government. The analysis carries significant outcomes useful for

exploiting teaching pedagogy for the benefit of skill and innovation centric efforts as well as improvement in infrastructural facilities in technical institutions. We have commented our recommendations for future invention in academic and research methodology to improve quality of engineering in the institutions. This may affect technical excellence enormously.

Scheme for Transformational and Advanced Research on Science (STARS)

140 high-end transformational and applied research projects are under

the process of assessment and impact evaluation. The division has developed an independent proposal on impact evaluation of high-end applied research projects sanctioned to Scientists and Professors belonging to eminent institutions in the country. The project is under execution. The division is executing the evaluation both in physical and expert input-based reviews towards impactful analysis. The project is expected to be completed by the end of January 2022.

A2K+ Proposal on Technologies

This proposal is conceived and developed by the division and submitted to DSIR. The main aim of the

proposal implies to information related to potential and patented technologies developed in the research laboratories.

It is a scientific R&D proposal submitted to Ministry of Science for the approval. The time duration of the proposal is expected to be 1 year.

Evaluation of Quality Characteristics of Training Programs

RACB, in collaboration with NABET, is executing quality evaluation of training programs being funded by the ISTM. However, this project is currently on hold due to some administrative issues

of ISTM. The dialogue is on with ISTM in order to address the issues towards smooth execution of project.

Scholarly Research Papers

- Studies on Elemental Characterisation of Air Pollutants in and Around Densely Populated Urban Space

- Manuscript entitled Magneto transport properties of Ag doped La-CaAgMn oxide polycrystalline ceramics

Training and Capacity Building Cell

Updates (October – December, 2021)

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-Trainings for the employees of government and private organizations. The trainings are sought after as they are conducted in real time by industry experts, are cost effective and encourage knowledge retention through interesting visuals and interactive sessions.

QCI has set up a high-end platform under the "eQuest" brand which can handle several users simultaneously. The focus remains to support the 'Make in India' Mission. It has 50+ e-eLearning courses on various domains like Laboratory, Healthcare, Manufacturing, Management, Environment Quality, etc. which can be accessed anytime and anywhere. In the coming time, eQuest envisions to expand its list of domains to realize the goal of creating skilled and capable youths.

TCB's Virtual Trainings: A Discourse towards Progress in Stagnation

- Continuing the tradition of holding interactive virtual trainings, in this quarter we successfully concluded 33 training programs on various Accreditation & Certification Standards and other general topics. About 1000 professionals and university students got benefited from these programs.
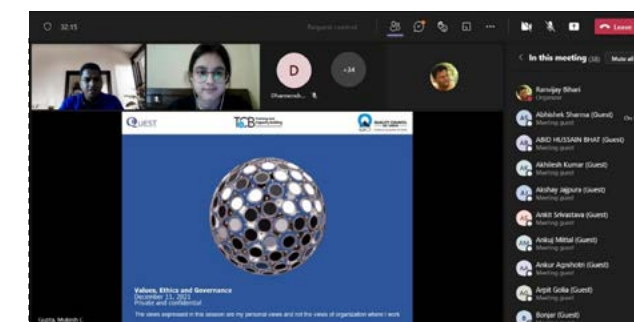
Exclusive virtual training for the officials of a private organization

- The programs also included exclusive sessions on 'Organizational Values, Ethics & Office/Workplace Etiquettes' for the officials of a private organization.

- On 28 October 21, TCB successfully concluded its third batch of Instructor-Led virtual training on '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 completed and passed the examination.

- In addition to the exclusive trainings, TCB conducted the Instructor-Led-Trainings programs on Audit Training programs on ISO 19011, ISO/IEC 17025:2017 for Testing & Calibration Laboratories, ISO/IEC 17020:2012 for Inspection Bodies, ISO 15189:2012 for Medical Laboratories, Fundamental of Digital Marketing, Cost of Quality etc.

Commenced with the onsite Capacity Building Trainings

We commenced with our on-site training where officials of 'Indian Society for Certification of Organic Products (ISCOP)', Coimbatore were imparted training on 'ISO 19011:2018 - Internal Audit on ISO/IEC 17065:2012'. The training delivered was customized aligning with the requirements of the organizations.

Unlocking possibilities through eLearning Courses- eQuest
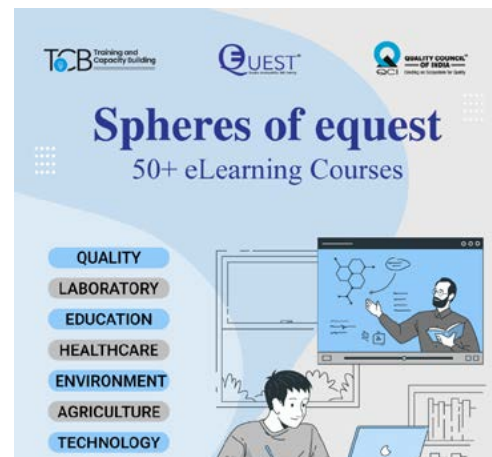
eQuest has been witnessing a steady rise in the number of learners being benefited from the eLearning Courses focusing on the core areas of QCI.

In this Quarter about more than 800 people registered with us.

Inked MoU with University to make Youth Capable

QCI has signed an MoU with ICFAITECH with the aim to recognize QCI for Capacity Building activities to bridge the skill gap in the form of blended learning activity.

Jal Jeevan Mission recognizes TCB, QCI as a
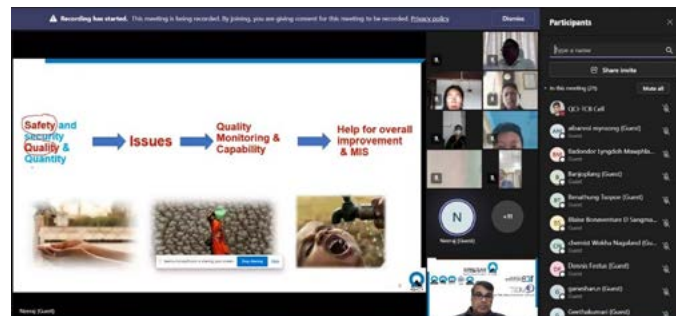
National Jal Jeevan Mission Training

Key Resource Centre

National Jal Jeevan Mission has recognized QCI to engage for Capacity Building activities, reorientation of different stakeholders, dissemination of knowledge and information, development of high-quality print and audio-visual content, documentation of best practices, etc. to transform the eco-system of drinking water supply sector. We have been assigned to conduct virtual training, webinars and classroom training for level-2 (middle management) and Level-3 (community level). So far 8 trainings for the officials hailing from 15 states (Tamil Nadu, Uttar Pradesh, Manipur, Mizoram, Puducherry, Telangana, Rajasthan

A glimpse from a training for ADLQ, Qatar

etc.) of middle management or L2 have been conducted.

Association with SWAYAM continues

SWAYAM, an eLearning platform of Ministry of Education, has decided to renew Continuous Quality Improvement (CQI), a course by eQuest, QCI to run its 5th batch on their platform. The enrollment into the courses of CQI and Total Productive Maintenance has begun.

TCB's engagement in imparting knowledge on Education and Transformation

Alok Jain, Director, TCB was invited by CDAC Mohali as a speaker on an online training sponsored by Ministry of External Affairs for ITEC participants. He delivered a talk on the topic "Transforming Paradigms of Trainings in the Pandemic – Experience Sharing".

TCB's presence across Globe

- TCB successfully concluded an exclusive 2-day training (11 and 12 October 2021) on 'Internal Audit using the principles of ISO 19011:2018' for the officials of Anti-Doping Lab Qatar (ADLQ), Qatar.

- Successfully conducted virtual training sponsored by PTB Germany and initiated by 'Standards, Metrology, Testing and Quality Assessment (SMTQ) Forum' for the officials from Nepal on 'Laboratory System and Internal Audit'.

- TCB Head Alok Jain, as ILAC Dy Team Leader, observed regional cooperation ARAC's evaluation of 'The GCC Accreditation Center (GAC)' Saudi Arabia for Calibration Laboratories Accreditation program.

QUEST™
Quality. Employability. Skill. Training

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

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Sustainability, Self-Regulation, and Conformity Assessment

C.S. Sharma
Joint Director, PADD, QCI

Abhinav Bajaj
Accreditation Officer, NABCB, QCI

In-House

Background

Leaders gathered in Glasgow for the CoP26 Global Climate Summit recently, pledged to halt deforestation by the end of the decade and reduce methane emissions to help slow climate change. India too, as part of the 'Panchamrit' (5-point) plan given by the Hon'ble PM, Narendra Modi, announced that it will reduce emissions by 50% by 2030 and will reach carbon neutrality by 2070. This comes as a major development in light of India having the lowest per capita emissions of all the world's major economies – emitting 5% in total even though it accounts for 17% of the world's population. Despite this,

India has on several instances reaffirmed its commitment towards United Nation's Sustainability Development Goals (SDGs).

However, this does not discount the fact that between now and 2030, in order to maintain the current rate of economic growth (with the current business practices), India could be emitting anywhere between 35 to 40 billion tons of greenhouse gases (with a year-on-year increase of 4 billion tons per year). Thus, cutting even 1 billion tons of emissions (in order to achieve the Sustainability Development Goals (SDG)) could represent a reduction of 2.5 to 3% in absolute emissions in the next 9 years, which in turn could possibly affect the rate of economic growth given the prevalent methods of business operations. Thus, the only recourse in this regard would be a strong pivot towards integrating Sustainability in the country's economic growth plan for the foreseeable decade.

Sustainability and Self-Regulation

As India's population grows, more inexpensive power is required at all levels, including individual buildings and national power infrastructures. Energy efficiency is increasingly a critical aspect in meeting power demands. However, it would be impracticable to carry out true energy conservation measures without inculcating occupational health and safety and environmental measures as well. Not only this, several other contributing and critical elements would also be required to be addressed over the long term (as neither can exist in isolation without the other) - such as business continuity practices, information and data management etc. Thus, any ideal organization looking to not just survive, but thrive over the long term would instill such a self-improving mechanism that it addresses these elements vis-à-vis its sphere of activities and would not merely cease to act after meeting governmental and regulatory requirements.

Consequently, Voluntary Conformity Assessment and Certification is now re-asserting itself as the quintessential method by which it is possible to operate a constantly adapting and improving Framework of Self-Regulation, i.e., a robust body of work to methodically convert tacit knowledge present in the industry into aggregated rules and processes to live by. In industrial circles, this is commonly known as 'Good Regulation' or 'Positive Regulation'. This form of 'Good Regulation' goes beyond mere governmental compliance and encompasses prescriptive modus operandi growing out from within the industry to ensure it is a living, dynamic and evolving organism benefitting all stakeholders, both directly & indirectly, including the government and the masses. This good regulation will provide the technique and approach to truly move towards implementing sustained efforts with regard to environmental responsibility that will not only enable India to perform well against the SDGs but also create a whole new ecosystem of self-regulation working in tandem with voluntary third-party accredited certification.

What is heartening to note is that there is an increasing emphasis on sustainability across different industries in the country. India recognizes that it is currently the world's third largest emitter of greenhouse gases after China and the US. Coal Power Plants, Rice Paddies, and Cattle are the major sources of steeply rising emissions levels. The time is therefore ripe to engineer change from the ground up and let Conformity Assessment play the crucial role, to ensure the safe and effective implementation of environment-friendly and sustainable solutions. We require Conformity Assessments, which apply to systems, products and skilled personnel in order to achieve sustainability in business as well as demonstrate compliance to international standards for Safe Systems of work. It is to be noted that Conformity Assessments are NOT the tools but the toolbox in the form of periodic evaluation & certification framework, which help self-affirm that the industry and the economy both endure and are on the right track.

NABCB and PADD's Ambit

In this regard, NABCB (National Accreditation Board for Certification Bodies), a constituent board of Quality Council of India, has established itself as the national accreditation board of the country. Working within QCI's framework, it is tailor-made for the Indian industry and provides the necessary international recognition (IAF member and MLA signatory), and in several instances, prudent oversight as part of establishing the accreditation framework in the country. NABCB has already published Accreditation Criteria and related documents for Conformity Assessment Bodies for Quality Management System (QMS), Environmental Management System (EMS), Food Safety Management System (FSMS), Information Security Management System (ISMS), IT Service Management System (ITSMS), Occupational Health and Safety (OH&S) Management System (OHSMS), Medical Devices QMS (MDQMS), Energy Management System (EnMS), Educational Organization Management System (EOMS), Product Certification and Inspection. It is note-worthy that all of these ISO standards contribute substantively and specifically toward the UN's 17 Sustainability Development Goals and provide a structure to achieve continual economic social and environmental sustainability. Of note is also the Business Continuity Management System Standard (BCMS) (ISO 22301), which is a foundation for sustainable business practices, enduring the fickle market forces and business disruptions (Covid-19, terrorism & natural disasters for instance). Trustworthy Digital Repository Management System (TDRMS) is a certification for digital repositories, pertinent due to its ability to meet the SDG no. 9, 'Industry, Innovation and Infrastructure'. Also, NABCB has set out the Accreditation Criteria for Validation and Verification Bodies (VVBs) to provide Greenhouse Gas (GHG) Validation and Verification Services. Thus, NABCB has the requisite mechanism in place to facilitate equivalence of the outcome of the work of the VVBs.

Further, the Project Analysis and Documentation Division (PADD) works exclusively to establish synergy between Voluntary Certification Schemes (which enable self-regulation), voluntary standards/frameworks, SDG mapping, and govt. initiatives. One of its several schemes is the INDGAP (Indian Good Agricultural Practices) Scheme which aims to ensure sustainable agricultural practices at the grassroots level (both farm and production units) which, as a part of its many benefits, offset the release of emissions in the environment and helps in production of 'Safe Food'. Also, of note is the Voluntary Certification Scheme for Medicinal Plant Produce (VCSMPP), established to protect biodiversity (a SDG) & sustainable use of plants for medicinal usage in Ayurveda, Unani, Homeopathy (AYUSH) etc… The 'Food Hygiene Rating Scheme' is another effort towards food safety, geared towards rating food businesses supplying food directly to consumers, either on or off premise. Also, when it comes to sustainability beyond physical material, i.e., sustained availability and security of critical information, PADD's 'Conformity Assessment Framework for Protection of Critical Information Infrastructure' aims to build that cyber security ecosystem is trustable and viable for future use.

Future Synergy and Road Ahead

Both NABCB (with its national accreditation framework stewarding international equivalence and acceptance) and PADD (creating coherence among stakeholders of national, regional, industrial and global initiatives) are working under the umbrella of Quality Council of India to provide a unique prospect for India to pursue a systematic, over-arching and comprehensive pathway toward its commitment of sustainable growth. The quality ecosystem can ensure a long-standing and enduring system of industrial, agricultural, and ultimately social practices, which illuminates the way forward toward not only a carbon neutral but also a carbon negative India.

Global Citizenship: Evolving Through Time

Gulpreet Kaur
Intern, Media Cell, QCI

Diogenes, a Greek philosopher, when asked where he came from, proclaimed, "I am a citizen of the world" and changed the course of history. In this globally interconnected world, understanding and fostering empathy on an international level becomes of utmost importance. A way to develop empathy towards others is through global citizenship. The concept of Global Citizenship varies from person to person. The idea is that we are all co-habitants of this Earth, and thus are responsible for this world as a whole rather than just our nations. A global citizen is one that believes in and identifies with being part of a global community where they are an active participant in shaping values, cultures, and norms. In a world where citizenship is often seen only as a legal or political matter, looking at the same in terms of a citizen of the earth takes some work. It means picturing ourselves with others in the world and acting with ethical implications. With this concept of a shared existence comes a great responsibility to use this power in creating a positive impact on the world.

In the times of our early ancestors, social circles were small and knowledge was passed through word of mouth or experience. This was the result of the sheer distance and inability to communicate between different regions. Comparing that to today's society, we live in communities of millions and have a diaspora of knowledge and better contact with the rest of the world. We find ourselves in a powerful position to influence opinions whether to do well or to cause harm with this power that falls to our conscious minds.

As citizens of this Earth, we ought to view the world in an open, unbiased manner but that is hardly possible since us as humans are prone to mistakes. We are also rigid at times while discussing controversial issues where opinions tend to be polarized. This exclusion is apparent in many areas ranging from religion to politics. Individuals have different ideas of what is right and what is wrong. The conflict arises when we refuse to entertain debate and declare our opinion as to the superior one. Global Citizenship aims to provide a safe platform for all to coexist without pre-thought assumptions, which is a precursor to Social Change. Global Citizens are the agents of change, and that change starts with us identifying a need for changing how social norms work. It requires us to challenge discriminatory ideas and transform unjust social structures. It requires us to introspect on how we subconsciously participate in bias and stereotyping. Global Citizens identify the social problems constructed layer upon layer by our society through the years of historical and cultural contexts. Social change does not happen overnight, it happens gradually with the help of changing beliefs and changing times.

The people of today stand witness to the emergence of a new era. As countries surface from the worst of the pandemic, a new world order starts to take shape. A world that is deeply unequal and more polarized than any time in recent history. We find a world that is wrought with discrimination and violence, where trust in institutions is low and an uneasy peace has settled over conflicts. Here a common ground is harder to establish when the masses are afraid to even look at Global Citizenship as a good thing. A new world that we are stepping into needs time to heal and grow with its new ideologies and rules of engagement. A post COVID world that has survived the harrowing impact of a pandemic in modern times. One source of light in the gloom of lockdowns and self-isolation has been the positive action of solidarity by citizens towards those affected and those on the front lines. We see an unprecedented show of empathy in the form of medical students and retired health workers volunteering to help. Such actions whether intended or not, of protection, support, and comfort show global ethical citizenship. All this goes to show that the knowledge and Education of Global Citizenship matter more now than they ever did in the past.

The role of a Global Citizen in these new and changing times is a murky one. Yet, we are presented with a unique opportunity to reconstruct the meaning of Global Citizenship in the current times. Strong and inclusive societies are the foundation of thriving economies and we must all contribute to making this "new world" a reality. This task will come with its challenges and it will be a slow-moving iceberg but the fleeting and rare moment to create a vision is here. We must not waste this incredibly fragile hope and take the first step towards becoming Global Citizens by proclaiming, "I am a citizen of this World."

Shaping Inclusive Futures

An Overview of Accessibility in School Education

Om Tripathi
PADD, QCI

Two years of pandemic has not only shaken all the aspects of life, society, polity and economy but has also brought into fore the prevalent disparities. In a diverse country like ours, it becomes all the more pertinent to recognize such inequities in different geographies and sections of people. Thereafter, effective mechanisms need to be put in place to plug the gaps. Several measures have been taken in this regard by Government of India. One of the key steps being 'Sugamya Bharat Abhiyan' or

'Accessible India Campaign,' which is a nation-wide campaign launched by Department of Empowerment of Persons with Disabilities (DEPwD) of Ministry of Social Justice & Empowerment to provide universal accessibility to persons with disabilities. The standard guidelines have been prepared in this regard out of which some are applicable to specific environments.

Over 21 million people in India are suffering from one or the other kind of disability. This is equivalent to 2.1% of the population. Recently, it was revealed that 4,018 persons with disability were jabbed with both Covid-19 vaccination doses, while 8,390 were jabbed with single dose of Covid-19 vaccination[1]. This highlights that there's a need to track effectively and enable vulnerable population to be provided the essential benefits on priority basis. This is the opportune time to assess the status of accessibility as it marks six years of launch of Accessible India campaign and five years after the enactment of RPwD act.

According to Census 2011, there are 1.2 billion people in India, out of which about 833 million people live in rural areas[2]. The total number of children with disabilities is estimated to be 164.5 million. This makes it quite pertinent to review the status of accessibility in the education sector. Education of Children With Disabilities (CWD) has been an important part of policy planning and development in India for the past several years. The policies of the government of India towards the education of children with disabilities have been reflected in the various enactments, schemes and through institutions established for plethora of activities. One of the five pillars of National Education Policy 2020 is itself 'Accessibility'.

Accessibility and consequent inclusion in education sector has huge bearing on the commitment towards quality and democratization in education. It further meets the objectives of the UNESCO Convention against Discrimination in Education (1960) and other International Human Rights Treaties like the Universal Declaration of Human Rights (1946), Convention on the Rights of Child (1989), and UN Convention on the Rights of Persons with Disabilities (2006).

Hence, taking into an account the efforts undertaken in education sector in particular on promoting inclusive education, we need to acknowledge some of the model interventions initiated that can act as torch bearers for realizing the goal of inclusive and accessible education with an enabling environment. One of the private schools in Bangalore is following a unique model where every learner is encouraged to take part in all the activities believing that every child is capable and has something unique to offer[3]. There are no special sports day and all are encouraged to participate in cultural activities based on their individual ability. There's high

focus on preparation of 'Individualized Education Plan' (IEP). In one of the most remote tribal areas in the country, Saksham is a residential school promoted by NMDC and is considered as 100% disabled friendly campus for visually impaired, hearing impaired, physically handicapped and children with intellectual disabilities[4]. An initiative undertaken by NCERT has provided the conversion of NCERT textbooks into Indian sign language digitally for Classes 1 to 5 and the same is to be expanded to cover more grades eventually. These listed initiatives are steps in the right direction to support inclusivity for children with disabilities in education[5].

The interventions at institutional level require to be accompanied with efforts at household level and community level both in urban and rural spaces. There's a need to engage field level functionaries and community institutions such as self-help groups, federations and so forth in awareness creation on entitlements and benefits catering to persons with disabilities as well as for provision of barefoot rehabilitation services. Based on the needs and

availability of support services integrated model of school and special school provisions must be aimed at. Even at the institutional level the basic infrastructure design needs to cater to meet accessibility standards such as ramps to be constructed at appropriate elevation, adequate width of doors to rooms and toilets and likewise.

Thus, while the accessibility in itself is a wide area to be covered even within a particular sector, it has the vast potential to take the leap ahead in creating conducive environment for every child to receive quality education and contribute to the nation-building. This is further iterated through finding of Impact Future Report which reveals that India has the potential to create a $11.4 billion market for Disabilities, Accessibility & Inclusion by 2030 impacting 98 million People with Disabilities & the Elderly.

1 https://www.dailypioneer.com/2021/india/health-min--55--of-population-inoculated.html
2 https://files.eric.ed.gov/fulltext/EJ1115090.pdf
3 https://www.livemint.com/brand-post/bis-an-inclusive-school-11639487246363.html
4 https://thecsrjournal.in/sumit-deb-cmd-nmdc-csr-interview-covid-19/
5 https://timesofindia.indiatimes.com/india/primary-school-students-with-hearing-disabilities-can-access-ncert-lessons-digitally-in-indian-sign-language/articleshow/86463774.cms

Impact of India's Labour Codes on Women

Rashi Sharma
Junior Associate, QCI

Gender roles have been deeply entrenched in our society. Though it is widely eloquent that the path to post-pandemic recovery must be gender sensitive, there is a need to acknowledge that the long-term socialization process and the lack of access of women to formal education significantly shape the career choices for women. This is evident from the pre-pandemic Economic Survey of 2018-19, which reported that Women's Labour Force Participation Rate (LFPR) was 18.6% compared to 55.6% for men.

The costs for gaining social empathy and financial independence have been steep. Often limited to the domain of the unorganised sector, female workers do not receive their due payments and are often underpaid for their labour. Since women are perceived as a cheaper source of labour, they are often employed contractually at large factories or for home-based work. To address the consistent subjection of women to multifaceted inequalities, India recognises the need to make legislative reforms and invest in socio-economic empowerment.

The Union government passed the four new Labour Codes in 2019. Though the implementation of the same has been deferred, the Labour Codes consolidate 44 legislations passed over the years, and introduce certain amendments. These are: Code on Social Security Act, 2020; Occupational Health and Working Conditions Code, 2020; Code on Wages, 2019, and the Industrial Relations Code, 2019.

The Social Security Code consolidates social security benefits provided to workers across the organised and unorganised sectors. This code subsumes the previous laws including, the Maternity Benefit Act, 1961; the Employees State Insurance Act, 1948, and the Employees Compensation Act, 1923.

The erstwhile Maternity Benefit Act, 2017 rendered unintended consequences. India is one of the few countries to increase Maternity leave for female workers to six months. But women in the informal sector are hostile towards their employers and thus fearful of utilising their maternity leave. This code provides adequate safeguards to prevent any unlawful dismissal of pregnant workers. The SSC also specifies paid nursing breaks to new mothers and mandates every establishment with fifty or more employees to provide creche facility within the prescribed distance or the premises.

With previous legislations, employers capitalised on the vagueness of the term 'Wages'. Under the new Wage Code, workers of the same employer, performing activities of similar nature, are entitled to uniform payment of wages and bonuses. As wages differed across the country according to the State legislations, this Code brings uniformity to the wage and bonus laws, namely the Payment of Wages Act, 1936; the Minimum Wages Act, 1948; the Payment of Bonus Act, 1965, and the Equal Remuneration Act, 1976. It also clearly defines the components that constitute remuneration, and includes provisions for equitable overtime and conveyance allowances, house rent allowance, and any reward or bonus payable.

The Code on Occupational Safety, Health and Working Conditions is applicable to all establishments with ten or more employees and seeks to regulate the health and safety conditions of workers. Addressing issues of sanitation amenities for women at factories, this Code necessitates all covered establishments to provide adequate and separate washing and locker facilities for both, male and female employees. It further entitles women to be employed for all types of work, based on their consent. This not only gives them the freedom to choose their field of employment but through the most welcomed provisions, permits women to be employed for night duty, i.e., before 6 AM and after 7 PM, based on their consent. For matters of their health and safety, the government may require the employer to provide adequate safeguards prior to employment of women at such establishments. Further,

a step that should prove beneficial is the provision for a common license for a factory or industrial premises hiring contract labour. The OSH Code prevents any establishment from engaging with contract labour without procuring the necessary licenses.

With the Industrial Relations Code, an employer employing 100 or more workers needs to take prior permission from the appropriate government for lay-off, retrenchment, and closure. The code also recognizes negotiating agents to represent the concerns of workers in labour disputes. As women from the unorganised sector are underrepresented and not a part of a recognised labour union, this provision will indeed ensure equal representation for them.

The Code further provides for every worker, employed continuously for at least one year with, 50% of basic wages and dearness allowances if laid off, one month's notice (or equivalent wages), and 15 days' wages for every year of continuous service to the retrenched worker. It also ensures workers hired for a fixed period, enjoy the same entitlements and benefits that are available to permanent workers. These provisions prevent women from being easily laid off and will elevate their status and negotiation capabilities with their employers.

We are at a critical juncture where the Rights of Labourers have been heatedly debated on every front and their plight captured the spotlight during the pandemic. Whilst the Labour Codes are facing criticism from the intelligentsia of our country, there is an undeniable impetus in these new legislations to address the socio-economic issues of workers in the unorganised sector, particularly women. As employers prefer hiring women from rural areas as cheap,

contract workforce in factories, these four new labour codes address the major causes of disagreement by extending welfare facilities to them.

The four labour codes are far more inclusive and expand their scope to provide social security benefits to contract labour, fixed-term employment, gig workers, and platform workers, irrespective of their gender. These predominantly set a formal structure that supports women and their financial empowerment. To conclude, the codes are indeed well-intentioned legislations, which balance the interests of the employer and the employee. These provisions leave no room for ambiguity for both parties and thus have the potential to inspire confidence in workers and the business community, alike.

Green Building Concept-
Need Of The Hour

Dr Ajay Desai
Quality Catalyst Pvt. Ltd.

Green building (also known as green construction or sustainable building) expands and complements the building design concerns of economy, utility, durability, and comfort. A Green Building is one which uses less water, optimizes energy efficiency, conserves natural resources, generates less waste and provides healthier space for occupants as compared to conventional buildings.

Objectives of Green Building

Green Buildings are designed to reduce the overall impact on human health and the natural environment by the following ways:

1. Using energy, water and other resources efficiently.

2. By reducing waste, pollution, and environmental degradation.

FUNDAMENTAL PRINCIPLES: Structure Design, Efficient Energy, Efficient Water, Efficient Materials, Efficiency Waste and Toxic Reduction.

Different Types of Green Building Technologies in the World

Net Zero Concepts

Net zero or Zero energy buildings are built to operate independently of the standard electric grid. In simple words, they are able to produce their own power through the use of renewable energy sources. And yes, "Zero" here refers to both energy consumption and carbon emissions. Basically, such building structures consume zero net energy annually and do not produce any carbon emissions as it largely relies on renewable energy supplies like solar or wind power.

HVAC (Heating, Ventilation and Air Conditioning)

About half of a buildings energy demand are devoted to Heating, Ventilation, and Air-Conditioning (HVAC). Hence, it is barely surprising that this particular field has become an important point for innovation.

Today, all modern constructions employ HVAC systems; in fact, it is one of the functions that designates them as modern buildings or homes. Through a series of ducts, house warm or cool or dehumidified air flows into all the rooms of a home. A centrally placed HVAC system is one of the most silent and convenient ways to cool the entire house.
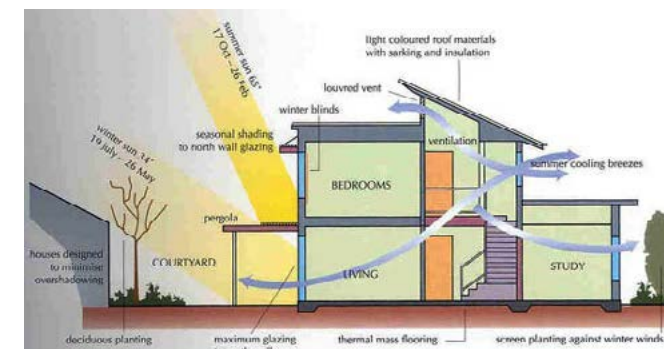
Low-Emitting Materials

Selecting Low-Emitting Materials and products not only improves human health but also goes a long way in protecting the overall environment. In addition to that, it also helps the building projects achieve Green Building credits from agencies like LEED, IGBC, and GRIHA; hence, it is quite important in today's design and construction world.

Optimal usage of natural resources and energy with a very high level of automation enables large-scale production to cater to the growing demand from this segment.

Cool Roofs

A Cool Roof is a sustainable green building technology which aims at reflecting the heat and sunlight away. It helps largely

1) Eco-Friendly Building Materials
2) LED Lighting
3) Solar Panels
4) Household Water Conversion
5) Wind Turbines
6) Harness Geothermal Energy
7) Sustainable Insulation
8) Energy Efficient Appliances
9) Water Re-use
10) Rainwater Harvesting
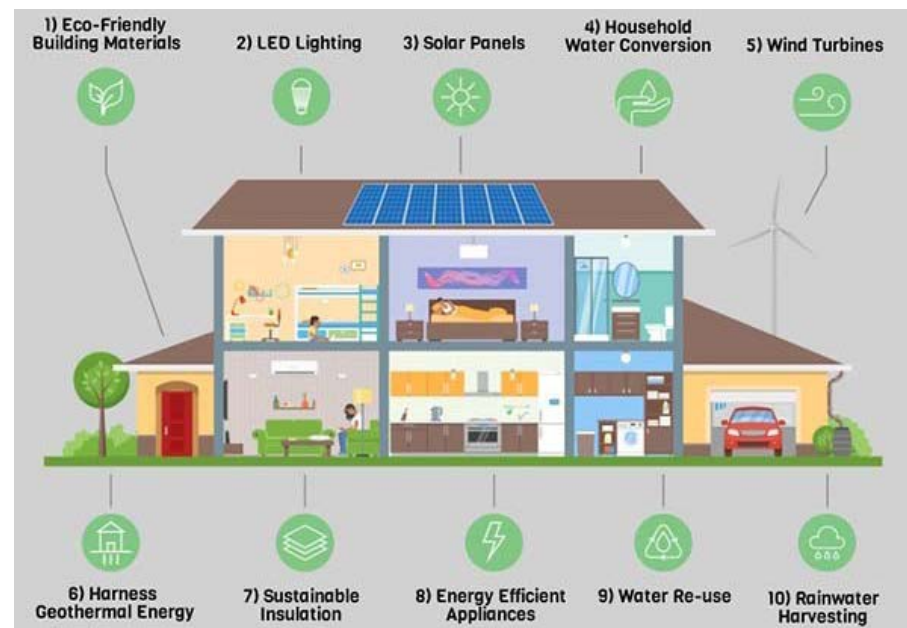
in keeping the buildings at standard room temperatures by depressing heat absorption and thermal emittance. Simply put, they reflect more of the sun's rays than average single roofs and avert the warm/cool air inside the home from escaping through the top of a building.

Green Insulation

Energy-efficient heating can only keep a building warm if there is sufficient thermal insulation to keep the heat inside. Another fact that might surprise you is that Insulation is one of the greatest concerns when it comes to the construction of buildings and homes.

Materials, denim insulation, cellulose insulation, glass insulation, and cotton insulations are few examples. The use of Porotherm Bricks is a great option as these bricks contain natural insulation properties.

Solar Power

Solar power is one among the most common sustainable green building technologies used in today's time.

Primarily in green construction, it is being utilized in two ways:

Active Solar Power –It helps in reducing the need for gas or electricity. While the up-front installation costs are higher in such systems, in the end it saves on energy bills and aids in reducing greenhouse gas emissions from non-renewable energy sources like fossil fuels.

Passive Solar Power – This design uses the sun's rays to warm homes through the strategic placement of windows and the use of heat-absorbing surfaces. The windows allow energy in and the heat absorbed reduces the need for warming the house during cold winter.

Smart Appliances

Green building technologies emphasize the installation of energy saving and self-sufficient home appliances. Smart Grid refrigerators, washing machines, dishwashers, micro oven are the examples of such technologies. These technologies are oriented towards creating zero-energy homes as well as commercial buildings.

Water

The principle of water efficiency and sustainable water management is quite achievable; it can be done by using alternative sources of water to meet the water demands where the quality of water need not be potable.

All the water fixtures like taps, toilets, shower heads, urinals etc. should be water efficient. Green buildings are sustainable buildings which demand water conservation as well as preventing pollution and reuse of grey water and recycle treated water ensuring potable water use for potable purpose only.

Looking to Green Building Concept In India

We are a country of 1.3 Billion People and counting …

31% percent of Indian population lives in Urban Areas

700% increase in commercial energy consumption in the last four decades and the numbers are growing

Energy consumption in India will touch 4 trillion units by 2030

There is a shortage of average 225 million liter water per day in major Indian Cities, and an alarming 21 Indian cities are estimated to run out of water by 2030

Green Building Construction presents one big solution to this unsustainable growth. By now, we all know, a green building is a structure which is designed, built, renovated, operated, or reused in an environmentally friendly and resource-efficient manner.

Social Benefits

- Enhance occupant comfort and health.
- Heighten aesthetic qualities.
- Minimize strain on local infrastructure.
- Improve overall quality of life.

Economic Benefits

- Reduce operating costs
- Create, expand, and shape markets for green
- Product and services
- Improve occupant productivity

Enviornmental Benefits

- Protect biodiversity and ecosystems
- Improve air and water quality
- Reduce waste streams
- Conserve natural resources

The Indian Green Building Council (IGBC) was formed in the year 2001 by Confederation of Indian Industry (CII). The aim of the council is to bring green building movement in India and facilitate India to become one of the global leaders in green buildings. India is witnessing tremendous growth in infrastructure and construction development.

 The construction industry in India is one of the largest economic activities and is growing at an average rate of 9.5% as compared to the global average of 5%. As the sector is growing rapidly, preserving the environment poses a host of challenges. To enable the construction industry to be environmentally sensitive, CIL-Sohrabji Godrej Green Business Centre has established the Indian Green Building Council (IGBC).

IGBC is a consensus driven not-for-profit council representing the building industry, consisting of more than 600 committed members. The council encourages builders, developers and owners to build green to enhance the economic and environmental performance of buildings.
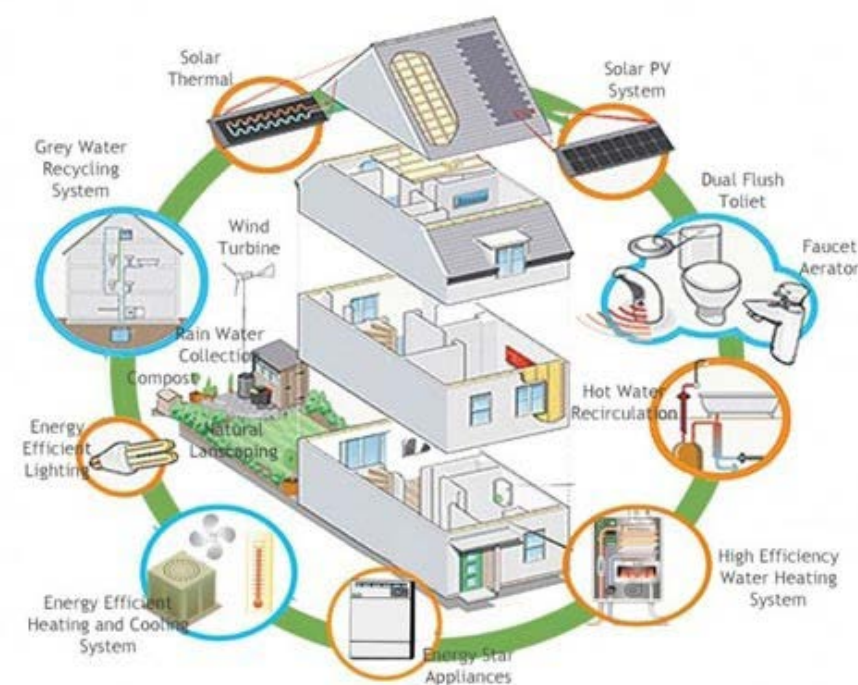
The Green Building Movement in India has been spearheaded by IGBC since 2001, by creating national awareness. The council's activities have enabled a market transformation with regard to Green Building concepts, materials and technologies.

IGBC Rating System

IGBC has developed green building rating programs to cover commercial, residential, factory buildings, etc. Each rating system divided into different levels of certification are as follows: "Certified to recognize best practices. "Silver to recognize outstanding performance. "Gold to recognize national excellence. "Platinum to recognize global leadership.

Green Buildings Project in India

- Suzlon Energy Limited-Pune
- Biodiversity Conservation India-Bengaluru
- Olympia Technology Park-Chennai
- ITC Green Centre-Gurugram
- The Druk White Lotus School-Ladakh
- Doon School-Dehradun
- Raintree Hotels-Chennai
- Nokia-Gurugram
- Rajiv Gandhi International Airport-Hyderabad
- Hiranandini-BG House, Madhya Pradesh
- Palais Royale at Worli, Mumbai
- Punjab Forest Complex, Mohali

So, for sustainability, to save environment, to save resources and for survival of the next generation, we have to implement Green Building concept religiously as our ultimate goal is to save our Mother Earth…!

Progressive Business Excellence Model (PBEM)
Through Organizational and Process Excellence for New Generation Business

Dilip Kumar Gayen
Head, Manufacturing Excellence,
Tega Industries Ltd.

Business Excellence (BE), an assemblage set of connected decision-based actions, originated on organization strategy for business result, profitability, survival and growth. It is a managerial technical & process mechanism of improvement connected to all business operations, customers, market with suppliers, and control on total supply chain. Most of the large industries implement the BE model developed by internal experts or internationally developed and accepted models.

BE Model is turning out to be more significant for leading business technically with unification of managerial and operational techniques. Modern management predominately relies on technical and functional analytics through digitally managed system & techniques towards digitalization with digital learning in their organization.

From the perspective of industry, for technologies, economics and manpower, the endeavor is to make observant and entice industries about the advancement of next generation business process on decision making through a Progressive BE Model.

Next generation business managers, at present are following the system & process evolutions under Industry 4.0 and 5.0 techniques and methodologies, which generate the multiple dimensions in business, technicality and competencies. It is a total transformation from authoritative leadership to proactive management, equipped with innovation, technical acumen through state-of-the-art technological to lead business combined with techniques & digital devices. These transformation initiatives towards the proficiency of leaders and managers will develop more technical and performance driven management.

In NGB (New Generation Business), technicians and manager's activities would be digitally managed and competent & experts on the processes to technicality lead their business. For effective control, the mechanism will be digitally managed for instant access their customers, networked globally with production & service lines. Modern names of COO/ CMD/ CPO could be modified as BPO (Business Process Officer) or CBM (Chief Business-Process Manager) to endorse and commend the business decisions with controlling all operations at any place and anytime.

Dimensions in NGB will be diverse elements, starts from monitoring the business with the framework of organizational excellence, operational excellence, improvement oriented and performance-based man management. Key challenges would be how to manage and maintain the technology with co-existence of human thinking and effort. Process would be invariably automated and workings will be predominantly digitally controlled method with standard operating & quality process.

This article is written as per the comprehension on the future of industry (FoI), future of factory (FoF) and the Managerial approach to make excellent business process through world standard organization. Several BE Models are available in various counties and industries, this article is based on the realization on the technological innovations with industry evolutions and on business trend.

Various Business Excellence Models developed by management gurus and countries such as Malcom Baldrige's MBNQA (US Award model, used in over 25 countries) based on 11 Interrelated Core Values and Concepts; EFQM Excellence model consists of six process

1. Optimum Manpower Utilization
2. Develop progressive Working Culture
3. Progressive and Proactive Management tectniques
4. Performance based Planning and strategies
5. Develop Business Excellence Model
6. Customer Oriented
7. Learning and Innovation
8. Strategy of Smart Business
9. Increase individual competency
10. Application of Human Intelligence with AI for Innovation and in Business Excellence

1. Productivity Oriented Technology
2. Prioritised of Quality & NCs
3. Effective use of Digitalization
4. Performance and Process validation
5. Combination of Technology and Techniques as per customers & market
6. Emphasise on Next Generation technology and techniques
7. Focus on Capability and Efficiency
8. Resource Planning for Optimum Utilization
9. Process Excellence through Reengineering
10. Product Planning as per industry & market

1. Applicaion of 3M Techniques: Measurement, Method and Motivation
2. Application of 3T: Team, Training and Techniques

1. Management driven by NGBM
2. Cost Effectice Technology & Process
3. Focus on Zero Defects and Abnormality
4. Efficient Utilization of Resources
5. Indiviual involvement in Improvement
6. Define and develop MES System

Figure 1: Sub-Structure of PBE Model

There are frameworks on which the model is developed, which is described in the following structure.
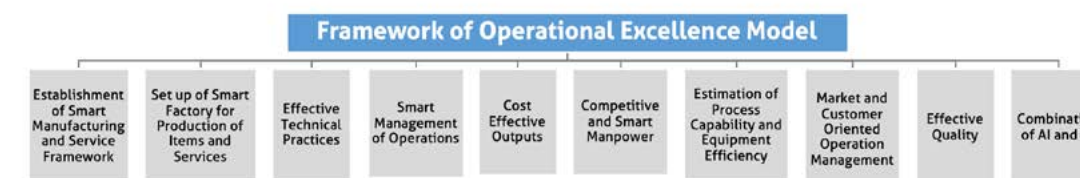

Figure 2: Criterion Framework of Operational Excellence Model

Operational Excellence Framework consists of the following Parameters;

enablers and one results category, Japan Quality Award Model in Japan. Others are Singapore Quality Award Model in Singapore, Canadian Business Excellence Model in Canada, Deming 14point's quality principles and Australian Business Excellence Framework (ABEF) in Australia etc.

The BPE concept and model are applicable to the Business Owners, Top Management, and Functional Heads and for Production & System Engineers. It is also be an awareness for the Academicians and Professionals in Business management, Strategic management, Production management and Quality & Industrial engineering.

Structure of the Progressive Business Excellence Model

It focuses on Next Generation management techniques. This structure covers and contains of the BE Model, to cater the application and implementation of the overview of the application process and organizational excellence techniques through a model. PBE Model is a combination of the organizational, operational excellence with improvement through application of various Process, Management and Control Techniques.

Approaches with role of managers under the PBE Model;

1. Make in approaches: to apply the model for organizational and business excellence

2. Make it imperative: to all individuals and functional heads

3. Make it techniques: for strategic planning and process development

4. Make a process: for effective quality standard with QA, TQM

5. Make a Path: for next generation business management techniques

6. Lead: as mechanism of performance management system for an organization

7. Apply, the Model as developmental method and tactic for the business and process

8. Best application: On HRD and HRM for employee development

9. Help system / process: internal and external process for efficiency

10. Adaptive system / process: design adaptive system

11. Tutorial assistance system / process: handholding for right and effective paths for development.

Conclusion

Some selective sample structures are described in this article. However, various structures are developed for readiness of next generation business model for global presence and on managerial approach to lead business and provide support to develop the strategy. The framework on implementation of 3M and 3T Techniques are recommendations on improvement in business management with the implementation of operational and organizational excellence model.

Future managers and business owners will develop and follow the various up to date models for making their business and outputs best in the world. It is an attempt to make a focus on the future trend and possible journey of the industry of various sectors. PBE experts are essential in the starting phase of formulation and implementation of the appropriate BE Model.

Challenges for Japanese working in Indian Industries Vs Indians working in Japanese Companies

Gunjan Chowdhury
Technical Advisor- Sourcing Railway Systems, Infrastructure Systems and Solution Division

Challenges for Japanese working in Indian Industries Vs Indians working in Japanese Companies

> 1983 -- the first major Japanese investment in India was by Suzuki Motor, with Maruti Udyog for manufacturing passenger Cars in India.
>
> 2020 -- Maruti Cars have approximately 53% of India's automobile market share.

At present, 1500 Japanese Companies are operating in India; about 350 major Japanese companies demonstrating their strong presence in the Indian market. With an estimated 15000 Japanese are working in India at various levels.

With about 15 years of work experience across all levels of management in 3 big Japanese companies -- Daikin, Hirohama, Toshiba -- I noticed the challenges faced by Japanese expats while working with Indian workforce.

Indian workforce while learning world's best work system with Japanese, are at the same time facing challenges of significant obstacle of cultural difference. There is always a communication gap due to language problems.

- Language is an important thread to improve understanding and relationship.

- Japanese's least favorite topic is Indian red tape bureaucracy, slow system, high taxation.

- Labor unrest and related problems in the industry is another major cause of Japanese anxiety and nervousness.

- Challenges for Japanese are of general attitude and approach in India is to cut corners & under carpet in quality and compromise on high standards, bypass the work Instructions

Safety First

The world looks up to the Japanese for their "Safety first" principle in their everyday life and at workplace. Many Japanese were shocked and surprised by the ignorance of basic safety rules by the Indian workforce. They wondered

why Indian workforce do not understand and realize the value of human lives.

Japanese Safety system exhibited by Japan's Shinkansen or Bullet Train, which runs with 250+ Kms/hr with a gap of 15 minutes between 2 trains on the same track; there is no accident-related death during the last 50 years of operation of Shinkansen trains. Strict

safety rules and system being followed in every Japanese company in India.

Cleanliness is always on priority for all Japanese, right from their childhood. Japanese parents teach their children the importance of cleanliness. Children do not feel shy to pick up wastes from the road and put them into a garbage bin on their way to the school. This Cleanliness habits continue till they grow up and start working.

Perception and reality are two different things. When entering the arrival terminal at "Narita International Airport," one can feel the difference with impressive, stunning, cleanliness.

In Toshiba India, I have witnessed with embarrassment, that the head of Toshiba RS10 Project in Hyderabad Plant, picking up litters almost every evening from the shop floor in a garbage bag, that included waste cotton, screws, nut bolts, pieces of electrical tape, empty teacups, etc. He did not listen our request to stop doing it; he ignored our request, as it was in his culture. He did not feel shy or embarrassed about it.

Bowing Down

JAPAN is a country where airport workers bow down to airplanes, A big surprised to note in the most positive way, were human relations, towards strangers. To start with, the welcome at the airport, where workers on the ground formed a line in front of the cockpit and bowed down to the plane with all the passengers in it.

In India Japanese struggle to digest noticing Indian workforce are ignorant of such litters on shop floors. The cultural disparity in cleanliness leads to many challenges and struggles for the Japanese management.

Long ago, a top Japanese boss of Daikin Plant advised me how to do a impartial vendor rating. He advised me to start factory inspection with --

• Factory's Washroom and Toilets
• Drinking water, Hygiene, and Facilities provided to the workforce in the factory.

The above two points are instant message of company's business ethic & culture. Shop floor, production line, documentation can be fabricated - showcased during inspection. Still, it may not be the company's actual and original report card to deliver quality & on time delivery.

Trust

Earning trust is an essential requirement for working in a Japanese team. Once trust earned, it goes a long way. The Japanese honor the relationship and support and stand by to highest authority.

Problems of a trust level are more prevalent in Japanese SMEs operating first time in India.

In Japanese culture honesty is to be followed in every step of life. It is a big challenge for Indian workforce to earn the trust of a Japanese in the beginning. Japanese get irritated while listening untruth, illogical, long explanation and clarification for a minor or petty matter. It is difficult to note from their face that they are upset or irritated. It may appear that the Japanese has understood the explanation by the Indian, but unfortunately it is not. He has not understood even 5%.

Japanese expect that for any reason, if a commitment is not possible to fulfill as per the original schedule, it should be announced in advance.

Education Vs Skill

Japanese believe in experience over academics, which is just the opposite in India. Japanese believe in practical training; they think their systematic and robust training systems will develop good skill of workforce to deliver best quality.

Punctuality

Japanese get impatient and unhappy if the time is not respected. If someone is late, Japanese will frequently look at wristwatch.

Japan might be the only country where one can notice punctuality of trains, buses, and airplanes – office- meeting everything. Japanese always arrive at office and factories before time.

I am honest to write while serving as the President of Neemrana Industrial Association, sometimes for meeting and events, I used to print two separate invitation letters with one hour time difference to avoid embarrassment. Because Japanese always arrived 5-minute before whereas my Indian friends were always late. It caused embarrassment.

Punctuality is one vital point to earn the trust of a Japanese.

Meetings

Japanese will arrive at a meeting room 5 minutes in advance. If someone is late, they will acknowledge the person politely with a smile and bow. But subtly, they will look at their watch and pass a silent message that he is late.

Japanese dislike a meeting scheduled for one hour but continued for hours without achieving any concrete decision or output. Disliking of Japanese in a meeting is: long narration, long explanation, aggressive talking, difficult English words and arguments, interruptions, repetitions.

People who work with Japanese might have observed that in a meeting, a Japanese doesn't speak up until he is requested. He will wait for his turn and will not jump in or interrupt anyone.

Japanese believe in teamwork. A Japanese boss will publicly accept and take responsibility for any mistake by a team member, whatever it may be and will not blame any team member.

Communication in Meeting

There are problems too in meeting with Japanese. Generally, during a meeting Japanese start talking to their fellow Japanese in Japanese, which keeps the Indians watching blank, listening helplessly and feeling ignored. Then Indians too start talking in Hindi.

In Indian culture, such communication is not accepted and liked. It is considered as insulting. Japanese need to understand this perspective of Indian culture and should try to avoid such type of communication.

In general, Indians are much emotional and have strong link and bonding with family members and relatives. Before coming to India to work for a long time, Japanese need to study and understand the values of Indian tradition, culture, festivals and Indian family structure. Japanese need to know and understand that Indian workforce lives and comes from villages. Their daily lifestyle is very tough and different from that of Japan.

Indian workforce sometimes become unhappy and hurt when they notice a Japanese Supervisor behaving indifferently for a small reason, because of lack of knowledge of Indian culture and social systems in villages.

Japanese are top boss in Japanese companies in India

Japanese companies always appoint Japanese as managers and top bosses in India; they are somehow reluctant to give free hands to Indian managers, may be for trust issues. This is observed more in Japanese SMEs operating first time in India. Sometimes, unfortunately, a Japanese boss creates major problems for his organization and leads to financial losses because of little knowledge of local culture, language, geography, politics, castes, religions, local festivals, labor issues etc. It is very true that all Indian workforce are always ready to help and satisfy their Japanese Boss.

First Indian Chairman & MD in a Japanese Global MNC

In 2010, Japanese MNC Daikin Airconditioning Co took a strategical risk by appointing an Indian as MD of Daikin India to lead the company who WON THE TRUST of Japanese and changed the future of Daikin in India. He created a new horizon for Daikin in India and in Asia. The Indian MD is now the CEO & Asia Chairman apart from a member of Global Board of Director of Daikin. Under his dynamic and strong leadership, the company is conquering peak after peak with vertical growth from Rs 500 crores in 2010 to Rs 6000 crores in 2020.

Trends Shaping in the Future of Cloud Computing

Prashant Sharma
Founder and Designated Partner, Credere Global Services

Cloud Computing is quickly becoming one of the most popular trends in technology today. With more companies recognizing that they can save huge chunks of time by using their own networks instead of purchasing expensive servers, more companies are switching over to this new technology.

The future of Cloud Computing is evolving and pushing boundaries, and there are many powerful trends that are shaping the industry. The following are some of the most important developments that are likely to affect Cloud-Based IT in the next few years. Regardless of the industry, you are in, you will find a cloud solution that fits your needs.

Consider these factors as you develop your cloud strategy. You will be surprised how quickly the market is changing

Increased Cost Transparency

While Cloud-Based Infrastructure is more affordable than traditional IT infrastructure, some businesses are hesitating to move to the cloud because of security concerns. However, by the end of the decade, cloud adoption will become more widespread as more

enterprises feel safe in the environment. Then, the next decade will see widespread adoption and widespread use. It is important to note that while most companies are only using the cloud for a small proportion of their IT needs, it is still a large percentage of the industry's total spending.

Persistent e-Infrastructure

Regardless of the industry, Cloud-Based Infrastructure will be a core part of organizations' strategy in the next few years. By the end of the decade, it will be an integral part of the economy. As more businesses and organizations adopt cloud computing, it will be crucial for organizations to consider how it can best serve their business. This report will provide a roadmap to making the most of your Cloud-Based IT Infrastructure.

Redefining Customer Experiences

Public cloud services have been steadily gaining momentum in the business world. By providing business-grade solutions, they can help companies to coordinate their activities and improve their operations. In addition, they can simplify their internal processes. The public cloud has become the core of the cloud and will only continue to grow in the future. With this in mind, the future of the enterprise is Cloud-Based. The adoption of public clouds will grow

because companies are increasingly looking at customer experience when developing and delivering new products and services.

Despite the hype that Cloud-Based solutions are having, it is still too early to see the full impact on the world's economy. As the market for the cloud continues to grow, these innovations will continue to shape the future of business or businesses.

Software for Industry 4.0

Rajith Raveendranath
Director-Engineering Nike

Anish Cheriyan
Sr. Director-Harman International

Industry 4.0 is right here. Never in the history, there has been any industrial revolution, which is spanning across different areas. It covers technologies from the cyber physical world. Some of the major ones (but not limited to) are Big Data, Cloud, Blockchain, AR/VR, 3D/ Additive manufacturing, AI/ML, Robotics and many others. If we look deeper, one of the major game changers is the software advancement, which is shaping up industry 4.0. The technologies, which make up the fourth industrial revolution, are many. Software has accelerated the realization of these technologies, with its evolved capabilities. Software has undergone a metamorphosis of sorts, from being just a set of rules that drives the early computers, to its current form, which is autonomous and intelligent. Procedural programming languages are making way for more expressive and functional ones. Server-based software architecture is being increasingly replaced by distributed and serverless patterns.

The characteristics of the digital enterprise software are many, including being distributed, multimodal, reactive, API first and elastic. A casual search in the web about Industry 4.0 software can list dozens of attributes and keywords, which could overwhelm an engineering team who want to take their first steps with it. There are three technologies, aptly named as ABCs, which are fundamental to the digital software, and can be adopted first.

Artificial Intelligence / Machine Learning

Algorithms have been around for centuries, from the times of the Vedic Indians, the ancient Greeks, the eponymous Al Khwarizmi of Persia, to the mathematicians of Europe during renaissance and the logicians of the free world. Machine Learning can be applied on all types of data that the digital enterprise deals with, including structured data, text, audio and video, to generate insights and inferences. These insights empower the enterprise to be autonomous and intelligent. For example, a digital superstore can do text analytics of tweets related to its latest facelift and apply sentiment analysis to infer the user feedback. AI or Machine Learning, its rather popular synonym, is inseparable from Algorithms. It would be this perceived complexity, around algorithms, math, and models that makes engineering teams feel it is rather esoteric. The implementation of the algorithms is not the challenge to the engineering team. There are production grade modules of the machine learning algorithms available as software libraries and frameworks, which have simplified the programmers' challenge, for example, by letting one develop a deep learning model based on a multi layered neural network, in a few lines of code. It helped in debunking the complex perception about deep learning and helped us understand that it is nothing but "deep" layers of neurons, which are trained to "learn".

The engineering team could focus on integrations. There are two advantages in it. The first one is that, it avoids overfitting, which happens when we try to tune the model for better accuracy with more and more training data. The next advantage is that, the team can start with AI/ML today, without hiring a team of data scientists or ramping up on the algorithms, math and models.

Big Data – Storage and Processing

Big data can be considered as the consequence of Metcalfe's law, which says that the effect of networks is proportional to the square of the number of participants, and the ubiquity of the mobile internet. The mobile broadband technologies connected more than half of the world's population and brought high-speed internet to their handholds, more so in the last decade. With every million being connected to the internet, data would grow, according to Metcalfe's law, by a trillion. There are two main considerations for applications while they are dealing with big data. One is for its storage, and the other is for its processing. Modern messaging systems that support big data have three basic features:

- Loosely coupled, where publishers and subscribers can do at their own rates

- Resilient, no single point of failure

and inspection, the build is ready and the customer can use it further. Continuous Deployment is taking the next step where the release can be deployed into the production environment directly with the necessary authorisation and authentication.

Irrespective of whether we are developing software in monolith or cloud native application development, software engineering practices related to CI /CD should be ingrained in the development method. At the face of it, CI/CD looks to be an engineering practice mostly clustered with good coding and automation practices; however, other deep-rooted management and engineering practices should be followed in an effective manner. Following are some of the fundamental practices required for an effective Continuous Delivery adoption-

1. **Collaborate** between Developers, Testers, Operations, Security and all other Stakeholders who work in the team. Build practices to boost collaboration

2. **Automation** everything Mundane. The thumb rule is - anything which is repeatable and which machine can do, automate

3. Look for Server less **Deployment** approach where the infrastructure is provisioned and managed by the service provider

4. Identify the **Fitness Function** of the System and ensure that it is covered in the requirements, design, and code and validated through effective tests.

5. Follow Life Cycle that supports **Iterative** and Incremental Delivery

6. Keep **Requirements Small** so that the development can be done in an iterative manner

7. Focus on **Architecture Readiness** for Continuous Delivery. Cover aspects like deploy-ability, monitor-ability, test-ability and other factors in the Architecture

8. Have **Continuous Integration Architecture** based on the dependency on the components or microservices.

9. **Stage** the Build pipeline keeping the rule of thumb of providing fast feedback about the quality of check-in to developers

10. **Build Quality-In** into the Build Pipeline. **Continuously Monitor** the Build Pipeline and Drive actions based on that.

Summary

Industry 4.0 has brought-in significant changes in the way the businesses are done, in manufacturing, healthcare, transportation and many other industries. Software technologies like Big Data, Cloud, IOT, AI/ML, Blockchain has fuelled these major transitions. The software development methods should integrate continuous delivery practices as a part of the way of working. This would help in developing software, which is ready for Industry 4.0.

- Explicit delivery guarantees, you can choose lower latencies over in-order, exactly-once deliveries, or otherwise

Cloud Nativity – Microservices

For an enterprise application to run in the cloud, it should be elastic; which is the ability to consume only the resources that is required and scale on demand automatically. Microservices Architecture is a pattern where an application is composed of several independently deployed services. It redefines the rules of service design by preferring:

- Functional vs. structured composition
- Distributed vs. shared data, and
- Simply concurrent vs. managed concurrency

Microservices of today cannot be created using the procedural programming languages, which were used to create the applications of the last decade. Each microservice, that realises a business function, should be composed as a higher order function. This would be easier in the programming languages, which would allow using functions as first-class objects in its expressions intuitively. Lambdas, or anonymous functions, would be handy

in setting the values of such function objects.

Managing concurrency in today's application is wishful engineering, fraught with dead locks and race conditions. Microservices offer the much better choice of applications delegating the concurrency aspects to the framework. Node.js implements this in its event loop, whereas Spring Boot would spawn a processing thread for each request. Asynchronous processing can be further achieved by programming constructs like asynchronous methods, promises and futures.

Continuous Delivery

In order to develop software, which is ready for Industry 4.0, Continuous Delivery is the backbone. Continuous Integration (CI) is a software development practice where as soon as the developer checks in the code, the build pipeline is triggered where the pipeline runs in multiple stages. Each stage has a purpose where the Initial stages focus on the faster running tests, inspections and providing feedback to the developers and testers early about the quality of the build. Continuous Delivery (CD) is the logical extension to continuous integration where as soon as the software is ready after the various rounds of testing

Stainless Steel:
The Super Material

Sarika Aggarwal
Managing Director, Food Safety Works

In the Food and Beverages Industry, Stainless Steel (SS) is the most preferred material for food contact surfaces. Ever wonder why?

First and foremost, any material, that comes in contact with food must be corrosion resistance and inert in nature. When there is no reaction between the material and the food, not only does the material remain pristine, but so will be the food, uncontaminated by metallic constituents or corrosion products.

In India, FSSAI requires that the food contact material, under normal condition of use, should not transfer their constituents to foods which could endanger human health. The material should not bring about an unacceptable change in the composition of the food or any changes in the organoleptic properties. On both these parameters, SS scores high marks. Not all SS is equal and the most widely used is 304 because of its great properties.

The resistance to corrosion comes from an invisible, protective film of chromium- rich oxide, which forms spontaneously in the presence of oxygen or oxygenated water in the alloy containing 10.5% or more of chromium. Even if the film is damaged, it rapidly repairs itself once the source of the damage is removed and the surface is exposed to oxygen again.

In addition to the inertness and corrosion resistance, Stainless Steel has many more properties which make it an ideal choice for food processing plant and equipment. It is easy to make smooth, non-absorbent surfaces from SS and the inherent hardness helps it keep that way. Any rough surface makes the cleaning process difficult and will allow the growth of biofilms, which can present a hygiene hazard. SS can also withstand wide range of temperatures from cooking to freezing, and resist thermal shock -- a term used to describe rapid and significant change of temperature in short period of time.

The reliability and longevity of SS contributes significantly to its lifecycle costs. Even when a piece of SS has reached to the end of its useful life, the SS itself has not. The popularity of SS in the food industry is due to a combination of practicality and aesthetics.

Which Stainless Steel??

SS is a steel, which contains a controlled amount of chromium. SS is not a single material but a combination of over 200 iron-carbon-chromium alloys. SS is a steel, which contains a maximum of 1.2% carbon and a minimum of 10.5% chromium. Depending on the operating conditions and requirements some grades of SS may suffer corrosion, so a grade which has more chromium or which has additions of other elements such as nickel, molybdenum, nitrogen and copper, may be required because of its greater resistance to a particular environment or to a particular type of corrosion.

The simplest Stainless Steel is the iron-carbon-chromium alloys and these fall under 2 groups. The first group is the Martensitic SS, which contains only about 13% chromium, but they have high level of carbon (even up to 1%) which makes them difficult to form and weld. This also makes them very hard and strong and heat treatment can make them harder. AISI 440c contains 1% carbon and is extremely hard and is used in rolling contact stainless bearings and knife blades. A minimum of 0.45% carbon is used for superior kitchen knives, which will retain their sharpness even after prolonged use.

The other iron-carbon-chromium group is known as the Ferritic SS and these will typically contain about 17% chromium and about 0.05% carbon. These groups are called so as they are magnetic. They are commonly used for appliances like dishwashers, refrigerators and pans. SS 430 has acceptable corrosion resistance and is relatively inexpensive. The challenge with this is that it is less easily formed or welded than the austenitic SS (304). For applications demanding welding, grades like 441, which has an addition of titanium and / or niobium, are recommended.

With the challenges of the above two groups on fabrication, addition of nickel offers valuable advantages. There are three groups of iron-carbon-chromium-nickel SS. The first group is known as the Austenitic SS with 8 – 12% nickel content which makes them easy to form and yet tough. This also means they are ductile, and they can be easily roll-formed. Their 18% chromium gives them very good defense against general corrosion. They are the most commonly used SS in the food and beverage industries.

SS 304 is an austenitic SS, which contains approx. 0.05% carbon, 18% chromium and a minimum of 8% nickel. It is widely used in the food and beverage industry from milk tankers, kitchen sinks to brewing vessels. SS 316 is another version of 304 with about 2% molybdenum added and it is particularly resistant to high levels of chloride and sulphur dioxide in the operating environment. This makes it suitable for the storage of salty foods, white wines and aggressive media such as the pectin in jam making. The super -austenitic steels are tolerant of extremely aggressive conditions. High levels of chromium, nickel, molybdenum and nitrogen and a low carbon content confer to austenitic SS, superior or corrosion resistance in a wide array of aggressive condition.

There is another group, which is the Duplex Steels. These have high levels of chromium – 22% in grade -(2205)- 23% in grade (2304) and about 3% molybdenum in case of grade (2205). These grades are used in very corrosive environments such as mustard and vinegar making, cheese or fish -canning plants. Duplex Steels are expensive and have a resistance to general corrosion similar to austenitic SS but much higher mechanical strength. They also have a better resistance to stress corrosion cracking than austenitic SS and corrosion resistance superior to the 316 SS.

The third group is the Precipitation -Hardening SS. The cost of this group of SS is high which has a combination of iron-carbon-chromium-nickel but provides good corrosion resistance out of the austenitic grades with the excellent properties of the martensitic steels. A steel such as ASIS 630 has additions of copper (improves its resistance to reducing acids) and niobium (to help to reduce corrosions at welds).

Surface Finish/ Finishing and Design

The food contact surface needs to be smooth, to avoid any food residue build up, which is durable enough to resist cracking, chipping, flaking and abrasion and should not only resist the process soils but also be easily cleaned and disinfected. The rougher is the surface the more easily matter such as food will stick to it. This food will harbor microorganisms, which, if not removed, may multiply, and cross contaminate the next batch of food.

The design of equipment intended for the processing or storage of foods and beverages are stringent. The machinery / equipment must be designed and constructed which meets the hygiene standard, which will help reduce corrosion, which is the reason the SS is reinforced by hygienic design. Apart from the corrosion, the design of the food contact surface should be in a way, to avoid any risk of infection, sickness or contagion as well as be properly operated, cleaned and maintained. If a design leaves crevices between components, e.g., at joints or bends or under the bolts, these will not only retain process soils but also be difficult to clean. Cleaning agents may also be trapped in these crevices. The more smoothly the food product can flow through the equipment, the less danger there is of it being trapped in a dead area, which can be difficult to clean leading to all physical, chemical, and microbial contamination.

To Sum it up

Stainless Steel is the preferred material in the food and beverage industry due to its inert nature, ease of fabrication, durability, and the ability to recycle. Using the correct grade of steel for an application, designing an equipment with hygiene in mind, and prepared with care will ensure that all the 3 hazards are avoided from contamination.
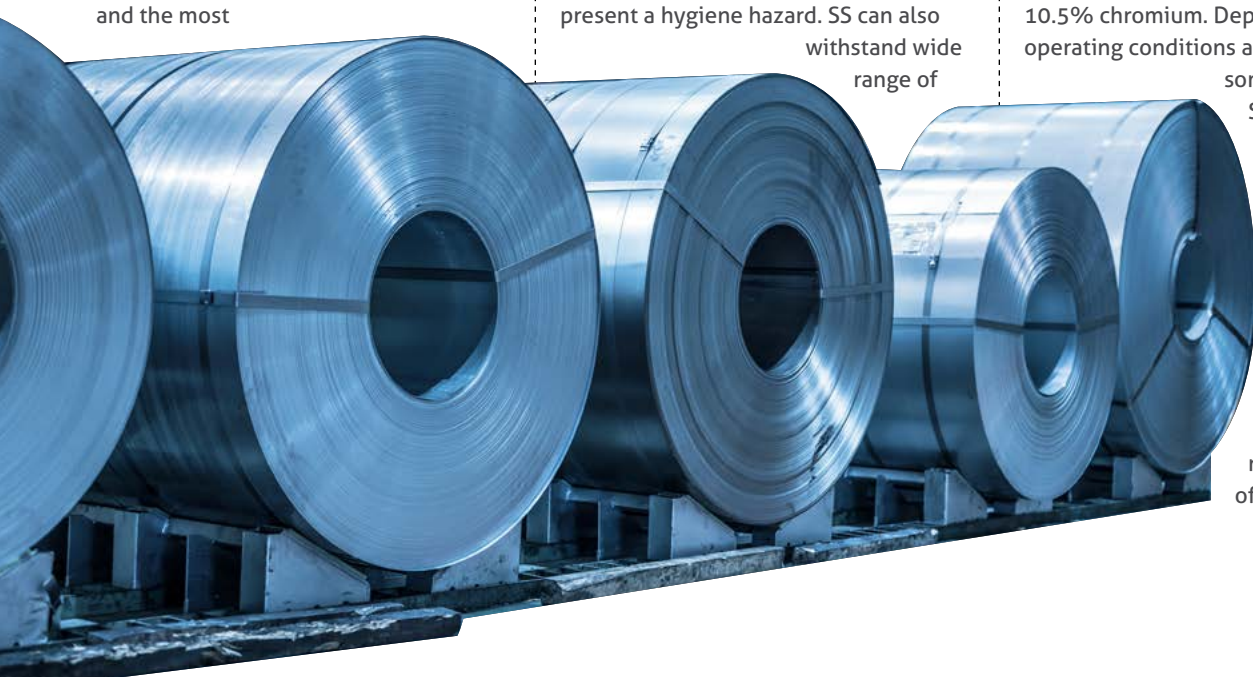
A3 UNDERSTANDING A3 THINKING

A Critical Component of Toyota's PDCA Management System

V. Umesh Naidu
TQM, Improvement Initiator, Lead Auditor (ISO 9000), Green Belt - Six Sigma

Introduction

Modern organizations strive to steadily improve their performance. To meet this basic level objective, continuous improvement requires effective problem solving to address the day-to-day, year-in-and-year-out problems they face. Whilst, many have developed sophisticated skills in "fire fighting," but addressing organizational problems to the level that likelihood of recurrence is greatly diminished, remains a rare skill.

A3 is a simple tool named after the size of a paper, because it fits on one side of an A3-sized sheet of paper, roughly equivalent to an 11 x 17-inch sheet. Developed by Toyota professionals, it is a way of thinking that is rigorous, focuses on hard data and vital information. It is a style of problem solving that is collaborative and objective based approach.

To understand the power of A3 reports and the thinking behind them requires a good grasp of the Plan-Do-Check-Act (PDCA) Cycle. PDCA is a high-level methodology for continuous improvement, which is a basic element of Total Quality Management (TQM)

Movement. In fact, PDCA is the fundamental philosophy behind A3 thinking.

In the beginning, the A3 system was first applied in automotive manufacturing. However, it is broadly applicable to almost any management system. Toyota uses the system in manufacturing, production engineering, product development, sales, marketing, and even in the executive ranks. Such a broad spectrum of applicability suggests that this system is transportable to many sectors. In fact, the system was also successfully applied in a healthcare context with excellent results.

This article outlines the art and mechanics involved in writing A3 reports

A System to Support PDCA Management

Toyota's management philosophy and culture is firmly grounded in PDCA, which is quite explicit throughout Toyota. In staff meetings, in one-on-one mentoring, in internal training manuals and courses, and even in public

presentations, PDCA is mentioned explicitly in everything Toyota undertakes.

It centers on the use of what Toyota terms A3 reports, the one-page documents that record the main results from the PDCA cycle. The report template (sample shown at the end of this article) serve as guidelines to address the root causes of the problems that arise in and around the workplace in a rigorous and systematic way. The reports that emerge from the process, document the plans so that they can be discussed, scrutinized, and once approved, are followed and implemented. They further invite reflection and introspection on what type of learning has taken place and document those learnings for future reference. In addition, they create a focal point for coaching and mentoring.

Although reports are the centerpiece of the system, the documents by itself are not the system. Toyota's system includes processes for approaching and following up on problems and opportunities, and it is the processes, more so than the documents, that lead to the results. Merely completing an A3 report will do little for the organization in the absence

of an appropriate process. Furthermore, it is important to understand the thinking behind the system. Not all problems or opportunities at Toyota are addressed using an A3 report. However, the thought processes behind the system are nearly always invoked. Furthermore, the style of thinking in the reports is not merely deployed in the manufacturing departments of the company, rather it is used in every function of the company at every level.

Inappropriate application of PDCA Cycle

PDCA Cycle only for Results

Appropriate application of PDCA Cycle

PDCA Cycle for both Process and Result

What is Problem Solving

The activities to fill the gap between the current level and the intended target maintaining the framework of the existing system.

- Dr Noriaki N Kano
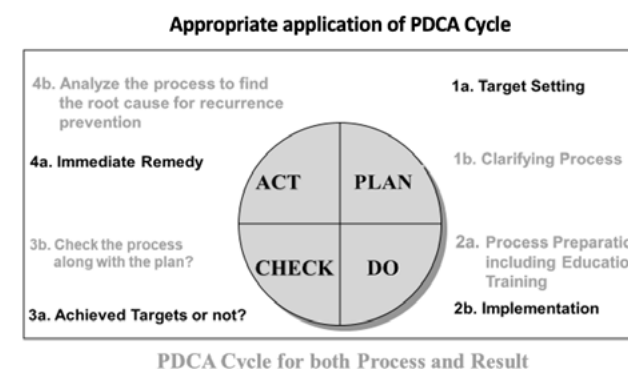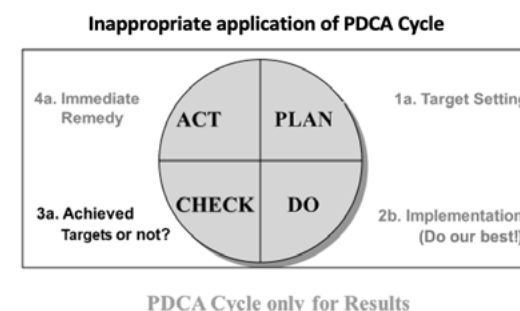Professor Emeritus, Tokyo University of Science & TQM Guru

A3 Thinking

The A3 Report is a powerful tool. It establishes a concrete structure to implement PDCA management. It helps in drawing a report to a deeper understanding of the problem or opportunity and giving insights into how to address the problem. It facilitates cohesion and alignment within the organization as to the best course of action. A3 Thinking is the key to avoiding 'Form over Substance' when using A3 Reports.

In addition, A3 Reports cannot be prepared in isolation by anyone working exclusively in their cubicle. There is a process, a set of principles arranged in sequence that calls out a set of behaviors needed to leverage the power of A3 Report as a collaborative problem-solving tool.

Viewing problem solving as primarily a cerebral activity would be inconsistent with the PDCA philosophy, with A3 Thinking, and with the Toyota way. Specific actions are needed to precipitate the right modes of thinking, which lead to the next actions and even deeper thinking, and so on and so forth, in a never-ending cycle

of thinking and acting to produce the desired improvements. Thus, the two important sides i.e. the thinking and the behaviors, must blend together cohesively to produce desired outcomes.

The Seven Elements of A3 Thinking

Toyota uses the A3 Report System to cultivate the intellectual development of its people. The company management deliberately attempts to create that development to happen in specific ways. That mindset behind the A3 System is distilled into the following seven elements:

Logical Thinking Process

Objectivity

Results and Process

Synthesis, Distillation, and Visualization

Alignment

Coherence Within and Consistency Across

Systems Viewpoint

Logical Thinking Process

It is the ability to be able to think and then act rationally in decision making and problem solving. The basic structure and technique embodied in A3 report writing is a combination of discipline when executing PDCA mixed with a heavy dose of the scientific method of investigation. It lays emphasis on the importance to factually discern the difference between "cause" and "effect" in the daily world of production. Conversely, Toyota views the inability to properly discern between cause and effect as the leading cause of many poor decisions and problems that remain unsolved in daily management.

The unfortunate reality is that

organizations face an infinite number of problems to solve but have only a finite amount of resources available to tackle them. Successful companies like Toyota are able to develop people to recognize the most important problems facing a business or a process, and instill in the employee the obligation and capability to solve the problems expeditiously.

Properly utilized A3 reports and the underlying thinking patterns help to promote and reinforce logical thought processes that are thorough and address all-important details, consider numerous potential avenues, take into account the effects of implementation, anticipate possible obstacles, and incorporate contingencies. The processes apply to issues of goal setting, policymaking, and daily decision making just as much as they do to business, organizational, and engineering problem solving.

Objectivity

As observation is inherently subjective, every person sees the world a little bit differently. As such, the mental representations of the reality people experience can be quite different, and each tends to believe their representation is the "right" one.

A3 Thinking, on the other hand, attempts to reconcile those multiple viewpoints. The problem-solvers necessarily start with their own picture of the situation and make it explicit so that they can better share it with others and test it. They collect quantitative facts and discuss their picture with others to verify whether that picture is accurate. If not, they make appropriate adjustments until it is an accurate representation of reality.

Objectivity is a central component to A3 Thinking mind-set. Effective problem-solvers continually test their understanding of a situation for assumptions, biases, and misconceptions. The process begins by framing the problem with relevant facts

and details, as objectively as possible. Furthermore, suggested remedies or recommended courses of action should promote the organizational good, not personal agendas. There is a little room in A3 Thinking for qualitative opinion or a dream.

Results and Process

Toyota production process is a results-oriented organization. Aggressive business and operational goals are set, and both individuals and teams are evaluated based on how well they achieve those goals. At Toyota, achieving goals using inferior processes is not acceptable. The ends simply do not justify the means. Achieving results accidentally or by coincidence is of little long-term value. With an A3 approach, the process can be refined and repeated for better results in the future.

At the same time, following the process but not achieving results is equally ineffective. The results truly are a test of one's understanding. Poor results not only fail to move the organization forward but also reflect a poor understanding, a situation that simply must be rectified. So continue to apply the process (that is, apply PDCA) until results are achieved that reflect an acceptable level of understanding.

A process that quickly jumps to a solution without a good grasp of the root causes, though it may achieve the desired results, would not be viewed as a successful project.

Thus, the third element of A3 Thinking says that both results and process are important. Results are not favored over the process used to achieve them, nor is process elevated above results. Both are necessary and critical to effective organizational improvement and personnel development.

Synthesis, Distillation and Visualization

A3 Reports are brief, by design. A brief report that hits the main point directly would be a breath of fresh air. However, brevity for brevity's sake is not the point, although it is an attractive side benefit.

The point of the brevity is to force synthesis of the learning acquired in the course of researching the problem or opportunity and discussing it with others. The exercise causes multiple pieces of information from different sources to be integrated into a coherent picture of the situation and recommended future action. Furthermore, not all information obtained is equally salient. Therefore, the report must distill the synthesized picture to only the most vital points needed for proper positioning and understanding.

Very often, the most efficient way to convey information is through a graphical representation to convey an information quickly in less space. Similarly, a simple sketch of the process and problem can eliminate a thousand words and the associated explanation time and energy required. Thus, A3 thinking encourages the visualization of the key synthesized information in order to communicate the message clearly and efficiently.

Alignment

Effective implementation of a change often hinges on obtaining prior consensus among the parties involved. With consensus, everyone pulls together to overcome obstacles and make the change happen. The fifth element highlights the high value Toyota places on developing agreement around decisions to take specific courses of action. Putting the key facts of the situation, the thinking process, the proposed action, and the follow-up plan in writing gives each person affected something concrete to which they can agree or disagree.

Alignment in A3 Thinking typically involves a 3D type of communication: (a) Horizontally across the organization, (b) Up and down the hierarchy, and (c) Back and forth in time. The problem-solving team communicates horizontally with other groups in the organization possibly affected by the proposed change and incorporates their concerns into the solution. The team also communicates vertically with individuals who are on the front lines to see how they may be affected, and with managers up the hierarchy to determine whether any broader issues have not been addressed. Finally, it is important that the history of the situation be taken into an account, including past remedies, and recommendations for action against possible exigencies that may occur in future. Considering all these will result in mutually agreeable and innovative recommendations and foster alignment of the organization.

Coherence Within and Consistency Across

One of the key points in writing A3 Reports is to establish a logical flow from one section of the report to the next. This promotes coherency within

the problem-solving approach, as part of the sixth element of A3 Thinking.

Often one finds problem-solving efforts as ineffective simply because the problem-solvers do not maintain coherency. They tackle problems that are not important to the organization's goals, propose solutions that do not address the root causes, or even outline implementation plans that leave out key pieces of the proposed solution. Therefore, coherency within the problem-solving approach is paramount to effective problem resolution.

In preparing an A3 Report, the theme or issue should be consistent with the organization's goals and values. The diagnosis of the present situation falls in line with the theme. The root-cause analysis follows directly from the analysis of the current situation. The proposed remedies address the root causes identified. The implementation plan puts the remedies into place. The follow-up plan tests the results of the remedies against the targets established earlier in the report to establish a high-level of consistency across organizational units.

Systems Viewpoint

Maintaining a systems viewpoint is a strong value at Toyota. Before one engages in a specific course of action, the individual is mentored to develop a deep understanding of the purpose for that course of action on :

- how the course of action furthers the organization's goals, needs, and priorities; &

- how it fits into the larger picture and affects other parts of the organization

A solution that solves a problem in one part of the organization only to create another one in some other part of the organization is generally avoided. Similarly, a recommendation to pursue a course of action that promotes one organizational goal at the expense of all others is also unlikely to receive a favorable hearing. The point is, the problem-solver should understand the situation in a sufficiently broad context, and a recommendation should promote the overall good of the organization.

Types of A3

Types of A3 →	Problem solving A3	Proposal writing A3	Project status review A3
Focus	Improvements related to quality, cost, delivery, safety, productivity etc.	Policies, decisions, or projects with significant investment or implementation	Summary of changes and results as an outcome of either problem solving or proposal implementation
Analysis	Strong root cause emphasis; quantitative/analytical	Improvements based on considering current state; mix of quantitative and qualitative	Less analysis and more focus on verification of hypothesis and action items
PDCA cycle	Full cycle focus, improvement and verify result	Heavy focus on Plan step. Check and Act embedded in implementation plan	Heavy focus on Check and Act step.

Summary

The seven elements of A3 Thinking, in fact, interact and reinforce each other. Most of the elements, for example, can be seen as extensions of the systems viewpoint or logical thinking processes. If one wants logical thinkers in the organization who take a systems approach to the problems they encounter, they would do well to promote objectivity, encourage synthesis and distillation of the most relevant information, diligently seek organizational alignment, at appropriate levels, for recommended courses of action, maintain consistency across units in organizational approach and coherence within any given problem-solving instance, and evaluate performance based on both process and results.

A3 Template

Problem Solving Report

Division/ Department / Section :

Report Theme :

Toyota's A3 Approach for Problem Solving

The report reflects Toyota's A3 philosophy that at least half the effort must be spent into proper understanding of the situation - which is shown on left side of the A3 sheet.

SN	Logical Steps of an Application Case	
1	Back Ground	Is there a clear theme of the case?
		Is the topic relevant to organization objective?
2	Current Condition and Problem Statement	Is the current condition clear and logically depicted in a visual manner
		Are the facts of the situation clear, or are there just observations and opinions
		Is the problem quantified in some manner or is it too qualitative?
3	Goal Statement	Is there a clear goal or target (What will improve, by how much, and when)
		Are there clear measures for the goal?
4	Root Cause Analysis	Is the analysis comprehensive at a broad level
		Is the analysis detailed enough and did it probe deeply enough on the right issues?
		Is there evidence of proper five-whys thinking about the true cause?
		Has cause and effect been demonstrated or linked in some manner?
		Are all the relevant factors considered
5	Counter Measure	Are there clear countermeasures steps identified?
		Do the countermeasures link to the root cause of the problem?
		Is the implementation order clear and reasonable
		(Who is responsible for doing what, by when, is 5W1H clear)?
		How will the effects of the countermeasures be verified?
6	Confirmation of Effect	Does the check item align with the previous goal statement?
		If performance has not improved, then why? What was missed?
		Highlight intangible benefits
7	Follow up action	Standardization and modification of work practices
		Education and training of employees
		Parallel deployment
		Remaining Problem

Credits : 1. Various academic books on TQM
2. My experiences in writing A3 Reports on "Problem Solving & Task Achieving" projects during my stint with a steel major

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