An initiative to encourage and enable MSMEs adopt Zero Defect Zero Effect solutions for attaining Maximum Quality while ensuring Minimum Impact on Environment.

apnaenge zed!

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CELEBRATING 25TH ANNIVERSARY

QCI — QUALITY COUNCIL OF INDIA®
Creating an Ecosystem for Quality

EDITOR'S NOTE

Dr Ravi P. Singh
Secretary General
Quality Council of India

Dear Colleagues,

It is a matter of great pride that QCI's sincere efforts in the past few months have yielded exceptional results towards our goal of enabling a better "Quality of Life" for citizens of India. Our endeavor to promote quality has resulted in expanding QCI's footprint across the country and allowed us new on-ground touchpoints such as food procurement mandis, interstate roadway entry points, waterways aiding domestic imports, among others. Herein, one of the key projects we have continued to scale up and execute has been the "Quality Testing of Coal". QCI receieved a 1-year extension from CIL in May 22 and has signed more than 2800 tri-partite agreements with coal companies and coal consumers. At more than 200 loading locations across the subsidiaries of CIL, QCI has been working on assessing the quality of coal with real-time tracking of samples. Since commencing operations, QCI has sampled approximately 310+ Million Metric Tonnes (MMT) of coal. A state-of-the-art portal has been developed to digitise operations and is a pro-bono initiative to strenghten ecosystem of third party sampling of Coal in India.

Meanwhile, QCI through its constituent boards has been focusing on niche aspects of quality and increasing awareness of key initiatives. In order to create an action plan for implementation across these initiatives, we continue to call upon the best minds to facilitate a robust dialogue. We are pleased to announce that on June 9, 2022, two of our constituent boards—NABCB and NABL—celebrated World Accreditation Day 2022 under the theme "Accreditation: Sustainability in Economic Growth and the Environment" in an effort to educate all stakeholders about the significance of accreditation. Eminent dignitaries like Mr. Rajeev Kher, the former Secretary of Ministry of Commerce; Mr. Anil Agrawal, the Additional Secretary of the Department for Promotion of Industry and Internal Trade and Mr. Adil Zainulbhai, the Chairperson of QCI, and other notable individuals graced the occasion.

Furthermore, QCI has launched two market-driven eLearning courses in fields of laboratory and healthcare, through our online platform eQuest. We believe that capacity building is key to sustaining quality initiatives and upskilling is imperative in a world with ever-changing consumer and market needs. While the course on General Requirements for the Competence of Reference Material Producers (RMP) will provide a thorough comprehension of how ISO is interpreted in the context of laboratories, the Program on Implementation (POI) - NABH 5th Edition Standards for Hospitals, seeks to train internal counsellors within hospitals and offer advice to healthcare providers on how to adopt NABH standards.

During this quarter, we also hosted QCI's 21st and 22nd Virtual Quality Conclaves; "Workplace Safety in MSME Enhances Productivity" and "Drones Sector: A Way to Quality". Additionally, at the Global Conclave of Association of Healthcare Providers India (AHPI), QCI as its knowledge partner, powered the session "Quality Governance and Technological Initiatives in Healthcare" which aimed at applying industry best practices in the Health Sector and focused on value-based patient health outcomes. QCI as a knowledge partner for CAHOCON 2022 led the session on 'Creating a culture of safety in healthcare' focusing on incremental benefits of a safety culture (covering processes, people) within healthcare organizations.

Another new sector we have ventured into is ensuring quality in the Transportation Sector. We have proposed to conduct an independent third-party assessment of bus depots, workshops, stations, and buses in different states, and it shall kickoff from the state of Uttar Pradesh. The evaluation will entail assessing the physical and mobile infrastructure quality, preservation of the infrastructure, the quality of services delivered, human resources, and safety precautions.

While upholding quality standards across all industries is critical, it continues to weigh the heaviest in the Healthcare and sanitation sector. Cleanliness and hygiene have been a critical component to mitigate early healthcare challenges. To meet these objectives as outlined in Swachh Bharat Mission Urban 2.0, our team is supporting NDMC and Chandigarh district to strengthen their capacity while also streamlining ULB operations. Also, the activities related to Swachh Survekshan 2021-22, Open Defecation Free 2020, Water Plus, and the Safaimitra Suraksha Challenge have all been completed by our team within stipulated timelines and have yielded empowering results.

In our 25th year, QCI continues to champion the quality movement and shall launch pro-bono sector specific projects as part of the celebration soon. Our goal remains unchanged; the 'idea of quality as an indispensable component in all walks of life' must permeate through the minds of every citizen.

Thanks!

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As the MSMEs are amongst the strongest drivers of economic development, innovation and employment, it becomes imperative to strengthen their ecosystem. The Government of India envisioned Zero Defect & Zero Effect (ZED) initiative to enhance MSME competitiveness, make them sustainable and transform them as National and International Champions.

Zero Defect Effect

OUR BOARDS

OUR DIVISIONS/ CELLS

MEMBERS/ GUESTS WRITE

Editorial Team: **Sanjay Singh | Shagufta Parveen**

Design: **Nidhi Batra**

MSME Sustainable (ZED)
Certification Scheme-
Creating MSME Champions

It is a well-known fact that Micro, Small and Medium Enterprises (MSMEs) are the backbone of an economy and therefore, ensuring their competitiveness is critical. As the MSMEs are amongst the strongest drivers of economic development, innovation and employment, it becomes imperative to strengthen their ecosystem.

Recognizing the crucial role of MSMEs in nation building, Hon'ble Prime Minister, Shri Narendra Modi, while addressing the nation on India's 68th Independence Day, urged the industry, especially the MSMEs of India, to manufacture goods in the country with "Zero Defects" and to ensure that these goods have a "Zero Effect" on the environment. He said, "We should manufacture goods in such a way that they carry zero defect and that our exported goods are never returned to us. We should manufacture goods with zero effect that they should not have a negative impact on the environment."

In line with this vision of Hon'ble Prime Minister, the MSME Sustainable (ZED) Scheme, in its new avatar, was launched by the Hon'ble Minister of MSME, Shri Narayan Rane, on 28th April 2022. The Zero Defect Zero Effect (ZED) initiative is envisioned by the Government of India to enhance MSME competitiveness and transform them as National and International Champions thereby contributing towards the realization of the vision of 'Aatmanirbhar Bharat.'

> "Our MSMEs' contribution is second only to agriculture and they have an important role to play in the country's economic development. ZED Scheme has been launched to boost the competitiveness of our MSMEs."
>
> **Shri Bhanu Pratap Verma Singh**
> Hon'ble Minister of State, Ministry of MSME

> "We have tried to inculcate concept of quality vs cost of doing business and that is perhaps one of the most important point of this upscale zed scheme."
>
> **Dr. Ravi P. Singh**
> Secretary General, QCI

The basic rationale of the Government support to MSMEs for undertaking MSME Sustainable (ZED) Certification is to assist in enhancing their quality and at the same time emphasize that the goods being manufactured have minimal impact on the environment. This will not only have numerous social benefits in terms of training of labour, creation of knowledge, increased productivity, introduction of new production equipment/methods in manufacturing etc. but will also boost the confidence of foreign buyers and investors in goods and services produced in India.

The scheme will be implemented in 2 phases:

Phase 1

For Manufacturing MSMEs with UDYAM Registration. This phase will focus largely on maximizing inclusion of manufacturing MSMEs and taking them through the journey of ZED. The scheme, in the current form and model, is a part of phase 1.

Phase 2

In this phase, Service Sector MSMEs will be included in the ZED Certification Scheme. This phase will also strive to integrate those MSMEs (Manufacturing and Service Sectors) who are registered under a State Government protocol/system but not on UDYAM. From this phase onwards, additional information regarding MSME operations/performance may be collected so as to create a National MSME Competitiveness Index.

> "ZED certification is dedicated to the Micro, Small and Medium Enterprises of India and it has been designed keeping in mind the intricacies of the MSME sector."
>
> **Shri B.B Swain**
> Secretary, Ministry of MSME

Key Features of the MSME Sustainable (ZED) Certification

Certification model based on conformity assessment	Three Certification Levels - Bronze, Silver and Gold	Zero use of paper; end-to-end online system
MSMEs can apply for any of the certification levels, depending on their readiness to fulfill the requirements of the desired certification level.	Provision of exemption(s) from assessment on relevant parameter(s) for the MSMEs with existing Certifications as specified in the scheme, like ISO 9001, ISO 14001, ISO 45001 etc.	

The ZED Certification Model

The ZED Certification Model, as given below, has been developed for the manufacturing sector and is applicable to all the manufacturing sectors. The Model aligns best practices in an integrated and holistic manner to help the MSMEs adopt systems that would help them embark on the ZED journey while enhancing their competitiveness and sustainability. The number of parameters for the Bronze, Silver and Gold certification levels are 5, 14 and 20 respectively.

An organization applying for a particular certification level i.e., Bronze/Silver/Gold under the MSME Sustainable (ZED) Scheme will be assessed on the following parameters, as applicable:

1. Leadership
2. Swachh Workplace
3. Workplace (Occupational) Safety
4. Measurement of Timely Delivery
5. Quality Management

6. Human Resource Management
7. Daily Works Management
8. Planned Maintenance & Calibration
9. Process Control
10. Product Quality & Safety (Testing/Certification)
11. Material Management
12. Energy Management
13. Environment Management
14. Measurement & Analysis

15. Supply Chain Management
16. Risk Management
17. Waste Management (Muda, Mura, Muri)
18. Technology Selection & Upgradation
19. Natural Resource Conservation
20. Corporate Social Responsibility

The Model also recognizes the efforts of the MSMEs that have already attained specific certifications and allows a provision of exemption(s) from assessment on relevant parameter(s) for the MSMEs with existing Certifications as specified in the scheme, like ISO 9001, ISO 14001, ISO 45001. Lean Certification of Ministry of MSME etc.

Benefits and Incentives for the ZED Certified MSMEs

Adoption of the ZED practices brings several benefits to the MSMEs in terms of creating awareness on best practices, environmental consciousness while helping them improve their bottom line through robustness of processes and systems. All these would lead to sustained growth and enhanced competitiveness.

To encourage the MSMEs to embark the ZED journey, the Ministry of MSME has announced several incentives and the basic incentives in place are:

Subsidy on Cost of Certification

ACTUAL COST OF CERTIFICATION

ZED BRONZE — Rs 10,000/-.

ZED SILVER — Rs. 40,000/-

ZED GOLD — Rs. 90,000/-

SUBSIDY ON COST OF CERTIFICATION

80% Micro Enterprises

60% Small Enterprises

50% Medium Enterprises

ADDITIONAL SUBSIDY

10% to MSMEs owned by Women Entrepreneurs OR SC/ST Entrepreneurs

5% to MSMEs which are also a part of the SFURTI OR Micro & Small Enterprises - Cluster Development Programme (MSE-CDP) of the Ministry

A limited-purpose joining reward of Rs. 10,000/- valid for 1 year after taking ZED Pledge which may be adjusted against any Certification

WASH Certification, Graded Incentives and Financial Assistance

MSME KAWACH	After taking ZED Pledge, MSMEs can avail support for their preparedness to mitigate COVID-19 risks after obtaining Certification based on WASH Standard
GRADED INCENTIVES	Graded incentives as prescribed by States, Financial Institutions and other Ministry/Depts etc. for the three ZED Certification Levels
FINANCIAL ASSISTANCE	• Subsidy on Certification • Financial support for Testing/Systems/Product Certification • Subsidy on Handholding • Subsidy on technology upgradation for Zero Effect Solutions

Financial Assistance

₹	**FINANCIAL ASSISTANCE IN TESTING/ SYSTEMS/ PRODUCT CERTIFICATION**	Up to 75% of the total cost of Certification, with the maximum ceiling of subsidy being Rs. 50.000/-
👥	**HANDHOLDING SUPPORT**	Up to Rs.2 lakhs for consultancy for all ZED certified MSMEs
⚙	**SUPPORT IN TECHNOLOGY UPGRADATION FOR ZERO EFFECT SOLUTIONS**	Up to Rs. 3 lakhs for all ZED certified MSMEs

The Ministry of MSME has also roped-in the state governments, various ministries and financial institutions and banks that are extending a plethora of incentives. More details about the scheme and benefits can be accessed on **https://zed.msme.gov.in.**

A winsome equation for MSMEs and the Industry

Ensuring competitiveness of Indian MSMEs is critical for the overall growth of the manufacturing sector and the country's economy. However, this would depend on the ability of the MSMEs to adopt best practices on quality, safety, supply chain management, natural conservation amongst others. The ZED Certification Model has holistically integrated the best practices to make it easier and simple for MSMEs to understand and adopt these practices.

Adoption of ZED practices in the right spirit will help the MSMEs manufacture quality products, improve productivity and enhance profitability while reducing the negative impact on the environment. This will also benefit the entire industry as MSMEs are critical to the supply chain.

> "To make an Aatmanirbhar Bharat, our MSMEs have an important rote to play and that is why we have launched the ZED Certification Scheme to improve their quality, productivity and also exports."
>
> **Shri Narayan Rane**
> Hon'ble Minister,
> Ministry of MSME

TEAM ZED

National Accreditation Board for Testing and Calibration Laboratories

Strives 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 stakeholders, initiating new programs supporting accreditation activities and pursuing organisational excellence.

BOARD **UPDATES**

n a b l - i n d i a . o r g

April 2022

Awareness Program for Reference Material Producers (RMP)

NABL conducted an awareness program for Reference Material Producers (RMP) on 26 April 2022 at Gurugram. Around 20 participants attended the program. An overview of the requirements of RMP accreditation and its related documents were explained during the program. The participants were sensitized about the need to develop RMs in our country. Potential RMPs were encouraged to come forward for accreditation as per ISO 17034.

Awareness Program on Accreditation of CABs

NABL organized "NABL awareness program on accreditation for laboratories in Mizoram state" in coordination with Project Management Unit, Public Health Engineering Department, Mizoram on 27th April, 2022 at Ajio Club, Aizawl. The Program was attended by more than 75 participants representing PHED Dept. (Dist. and Sub divisional labs), Medical testing labs, Forensic labs, Food and Drugs Dept., Pollution Control Board amongst others.

Mr. N Venkateswaran, CEO, NABL in his address briefed about NABL and the need of accreditation for laboratories. He emphasized the role of laboratories and their role in testing/

QUALITY INDIA

QUALITY INDIA

monitoring products. He encouraged all labs to come forward for accreditation. He expressed his gratitude towards PHED, Government of Mizoram for inviting NABL at Aizawl and encouraged Laboratories in Aizawl and North East India to go for NABL accreditation.

Ms. Iti Saxena, Deputy Director, NABL and Mr. Ashutosh D. Tatwawadi, Deputy Director briefed the gathering on NABL work, importance of accreditation and the process involved to get accreditation. A live demonstration on filing of application for accreditation cleared the doubts of all the participants.

May 2022

Stakeholders' Meeting with Medical Testing CABs

NABL conducted stakeholders meetings in the month of May 2022. CEO, NABL explained and clarified the queries received from the stakeholders. Stakeholders expressed their appreciation on the efforts put in by NABL in resolving issue of labs. Laboratories were apprised that uniformity in the assessment process in terms of assessor's perspective is being addressed by organizing assessors conclaves/ connect programs. It was informed that all the latest updates on NABL

activities/ policies were regularly published in our monthly newsletter.

Awareness Program for Proficiency Testing Providers (PTP)

18th May 2022, Lucknow

NABL conducted an awareness program for Proficiency Testing Providers (PTP) on 20th May 2022 at Lucknow. Around 20 participants attended the program. An overview of the requirements of PTP accreditation and its related documents were explained during the program. The participants were sensitized about the need to develop Proficiency Testing Providers in the country. Potential PTPs were encouraged to come forward for accreditation as per ISO/IEC 17043.

27th May 2022, Ahmedabad

NABL conducted an awareness program for Proficiency Testing Providers (PTP) on 27th May 2022 at Ahmedabad. Around 45 participants attended the program. An overview of the requirements of PTP accreditation and its related documents were explained during the program. The participants were sensitized about the need to develop Proficiency Testing Providers in the country. Potential PTPs were encouraged to come forward for accreditation as per ISO/IEC 17043.

June 2022

World Accreditation Day -2022

World Accreditation Day in India was jointly hosted by NABL and National Accreditation Board for Certification Bodies (NABCB) on 09th June 2022, this year theme being "Accreditation: Sustainability in Economic Growth and the Environment."

Qualmacon

NABL conducted interactive sessions with the persons responsible for management system in their respective organizations, for CABs operating in North India at New Delhi on 09th June, 2022. More than 100 persons actively

participated during interactive sessions and shared their views.

NABL informed latest updates about Product-Based Accreditation, Lab's Voice etc. The session included the outcome on the discussion points of last Qualmacon (conducted in October 2021).

During the session, NABL informed about changes in various documents and policies.

For better understanding and effective implementation of QR code and Blockchain portal, the process was demonstrated live to the participants.

CEO, NABL appreciated the participants for their presence and also for actively participating in the sessions.

Awareness Program for PTP

NABL conducted an awareness program for Proficiency Testing Providers (PTP) on 10th June 2022 at Mumbai. Around 30 participants have attended the program.

An overview of the requirements of PTP accreditation and its related documents were explained during the program.

The participants were sensitized about the need to develop Proficiency Testing Providers in the country. Potential PTPs were encouraged to come forward for accreditation as per ISO/IEC 17043.

3-Day Training Programme on ISO/IEC 17025: 2017

A 3-day (Level II) residential NABL Assessor Training Course on ISO/IEC 17025: 2017 conducted at Indian Institute of Packaging, Mumbai from 16th to 18th June 2022.

A Total of 16 participants attended the program.

Awareness Program for Reference Material Producers (RMP)

NABL conducted an awareness program for Reference Material Producers (RMP) on 17th June 2022 at Chennai.

Around 30 participants attended the program.

An overview of the requirements of RMP accreditation and its related documents were explained during the program. The participants were sensitized about the need to develop RMs in our country. Potential RMPs were encouraged to come forward for accreditation as per ISO 17034 for the benefit of the laboratories.

Awareness Program on NABL Accreditation and Benefits

NABL conducted an awareness program on NABL Accreditation and Its Benefits on 17th June 2022 in Aurangabad. Around 55-60 participants attended the program from the Industry, educational institutions and laboratories. In the program participants were made aware about NABL, its accreditation process, and benefits of accreditation.

Mr. N Venkateswaran- CEO NABL, in his special address briefed about NABL and the need of accreditation for laboratories. He emphasized on the role of laboratories and their contribution in testing/ monitoring product quality. He encouraged all the industry and institutions to come forward for obtaining NABL accreditation of their laboratories.

Ms. Syed Tahira Rizvi, Assistant Director NABL and Mr. Abhinav Thakur, Assistant Director NABL briefed the gathering about the process involved in obtaining NABL Accreditation. Further, participants were given an overview of NABL website and how to use the various sections. Also, a Video demonstration for filling an application on NABL web portal was shown to the participants. Interaction with the participants brought further clarity in the minds of the participants about the simple accreditation process.

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

NABL conducted training program in Hyderabad on ISO/IEC 17043: 2010 "General requirements for the competence of providers of proficiency testing" from 21st to 24th June 2022, Hyderabad.

15 participants benefitted from the program.

Participants were from accredited PT providers, Potential PT providers, Testing laboratories, and Calibration laboratories.

A 4-Day 'Technical Training Program on Conformity Assessment of Petroleum Products - Motor Gasoline' jointly with BPCL, Sewree

NABL organized a 4-day 'Technical Training Program on Conformity Assessment of Petroleum Products - Motor Gasoline' jointly with Bharat Petroleum Corporation Limited (BPCL). The training was conducted from 27th -30th June 2022, at BPCL, Sewree, Mumbai.

The opening session of the training program was graced by Mr. N. Venkateswaran, CEO NABL, Mr. Debashis Ganguly, CGM, P & AD, BPCL and Mr. R. Subramanian, DGM, QA, HQ, BPCL.

In his address CEO, NABL appreciated the cooperation extend by BPCL in initiating the one of its kind training program designed with an objective to impart training on the testing of critical parameters of Motor Gasoline. He stated that the program intends to harmonise the practices in the conformity assessment of petroleum testing laboratories. He shared his vision of harmonizing the approach towards conformity assessment in the petroleum industry.

Mr. Ganguly welcomed the participants and encouraged them to be interactive throughout the training and open up for any points of clarification. He acknowledged the efforts of BPCL officials to initiate the series of such programs envisioned for the harmonization of conformity assessment practices.

The faculty was very experienced in the field of Quality Assurance, International trade, crude & feed supply optimization. The participants shortlisted for the programs were from varied fields like equipment manufacturing, testing laboratories and accreditation body (NABL).

Through the training program, the participants gained insight into the evolution, refining and product knowledge of motor gasoline. The correlation of functional parameters and entire specifications for Motor gasoline was also explained. Testing of motor gasoline at the marketing lab of BPCL, Sewree was also explained and demonstrated.

The training concluded with a written and practical examination.

National Accreditation Board for
Hospitals and Healthcare Providers

Strives 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.

BOARD **UPDATES**

n a b h . c o

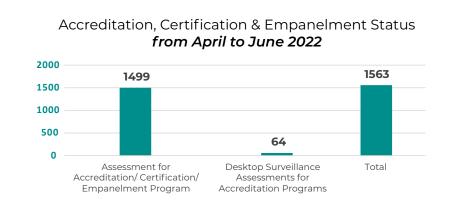During the period of April 2022 to June 2022 following work has been accomplished:

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.

Total number of assessment 1499 conducted for Accreditation, Certification and Empanelment during April 2022 to June 2022.

S.No.	Program	Assessment Conducted
1.	Assessment for Accreditation/ Certification / Empanelment Program	1499
2.	Desktop Surveillance Assessments for Accreditation Programs	64
	Total	**1563**

Accreditation, Certification & Empanelment Status
from April to June 2022

Bar chart values:
- Assessment for Accreditation/ Certification/ Empanelment Program: **1499**
- Desktop Surveillance Assessments for Accreditation Programs: **64**
- Total: **1563**

ACCREDITATION/CERTIFICATION/ RECOMMENDATIONS FOR EMPANELMENT GRANTED

S.No.	Program	Accreditation/ Certification Granted
1.	Accreditation Program	194
2.	Certification Program	483
3.	Empanelment Program	61
	Total	**738**

Accreditation, Certification and Empanelment Status
from April to June 2022

Pie chart:
- Accreditation Program: 194
- Certification from Program: 483
- Empanelment Program: 61

QUALITY CONNECT-LEARNING WITH NABH

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

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

- Programs on implementation are conducted on NABH Accreditation Standards of Hospitals, AYUSH, Blood Banks and Nursing Excellence, Entry Level Hospitals & SHCO Certification Standards, Clinical Audit Workshops and Continual Quality: Tools and Techniques Workshops

- The objective of POI is to provide guidance to healthcare provider on implementation of NABH standards. These programs are instrumental in developing internal Capability within the hospitals to work towards implementation of quality and patient safety standards, achieving accreditation and maintaining the same.

- During the period from April 2022 to June 2022, 19 educational workshops were conducted on virtual mode wherein more than 650 healthcare professionals participated

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BACK TO ROOTS

SPECIAL NABH POI COURSE FOR UNIVERSITY/ COLLEGE STUDENTS

Program on Implementation (POI) of NABH 5th Edition Accreditation Standards for Hospitals

We are pleased to inform that NABH is initiating a series of 3 days training workshop "Programme on Implementation of NABH 5th Edition Accreditation Standards for Hospitals" specially for University / College Students

The program will be specifically conducted only for closed group of Colleges / Universities offering Bachelors / Masters in Healthcare / Hospital Management. The students pursuing these courses shall be the intended participants for this program

Objective of the Programme

The objective of this programme is to train the young professionals on healthcare quality and implementation of NABH standards in healthcare organisation. The aim of the programme is to sensitise there bright students to the world of quality in healthcare and help them to work towards implementation of best patient safety practices, achieving accreditation and maintaining the same.

Course material and certificate for participants

Each training participant will receive a specially curated students course kit including the 5th Edition Standard Guidebook (worth Rs. 6000), official NABH merchandise, learning and reference material. The training will be a combination of theory, demo and panel discussions and will involve active participation.

Upon successful completion of workshop, candidates will be provided with a verifiable certificate of participation For more details of the program, please connect to Mr. Vikash Chaudhary, Administrative Officer - NABH
Phone: 011-42600622, 9873380280 | E-mail: vikash@nabh.co

Conducted on-site Program on Implementation (PoI) on 5th Edition Standard for Students of Masters in Hospital Administration at Chitkara University, Chandigarh from 4th to 6th June 2022

NABH Awarded 1st AYUSH Entry Level certificate Hospital in the august presence of Secretary, Ministry of AYUSH, New Delhi

NABH Interactive Workshop on CQI on 10th April 2022 through Virtual Platform

NABH Program on Implementation on 5th Edition Hospital Standards on 22-24 April 2022 through Virtual platform

OTHER ACTIVITIES:

1. Launch of revised NABH standards and guidebooks for all the programs- MIS, SHCO, Entry level certification standards, Blood Centers, Allopathic Clinics, Nursing Excellence, Dental Healthcare Service Providers, MLP

2. Initiating work on Physiotherapy / Homecare / Dermatology & aesthetics standards

3. Granting accreditation according to revised timelines thereby decreasing the turnaround time for applications

4. Launch of new portal for Hospitals

5. Initiating formulation of NABH excellence standards for various specialties of Modern Medicine

6. Addition of new areas for trainings and workshops under Quality connect initiative of NABH

7. Conducting Gap analysis for three Government hospitals associated with Medical colleges in Delhi under DGHS, MOHFW

8. Strengthening NABH-International program

9. Publishing NABH Text book of Patient safety & Quality etc.

Certification Awarded to AYUSH Entry-Level Hospital & Center

NABH Participation

NABH Participated as a Partner in the CAHOCON 2022 at Kochi on 2-3 April 2022 and setup stall for promotion

Meeting with CEO, National Health Authority

NABH meeting with Dr. R S Sharma, CEO of the National Health Authority (NHA), and an extremely fruitful discussion on the synergy between NABH and NHA. Dr Sharma shared his vision of driving digital Health in India

MoU Signing

An MoU was signed between NABH and Smile Train India to ensure the delivery of safe and high-quality cleft surgery at partner hospitals in India on 23rd May 2022

Team Meeting with Chairman NABH

NABH Team Meeting with Chairman NABH Prof. Dr. Mahesh Verma on how to take effective healthcare initiatives and new heights

NABH's Cost Effective "Go Green" Initiative

Mr. Vikash Chaudhary
Administrative Officer – NABH

Dr. Ebinesh Antony
Analyst - NABH

Plastic pollution has become one of the most pressing environmental issues, as rapidly increasing production of disposable plastic products overwhelms the world's ability to deal with them. Recycling takes a little effort on everyone's part, but makes a huge difference to the world. After years of planning and preparation, the ban on single-use plastic kicked in on 1st July,

2022 all over India. NABH has initiated a small step to save the Mother Earth.

As a way to reduce our negative impact on the environment and to commence with a solution, NABH thought of very basic action leaving a positive impact on nature and has come up with a very cost-effective and environment friendly initiative of sending the Accreditation and Certification Certificates in recyclable cardboard cylindrical boxes. Previously, the certificates were sent to the hospitals and the healthcare organizations in a plain black cylindrical plastic box containers. Every month around 500 NABH accreditation/

certification certificates are dispatched to our stakeholders in India.

Through this initiative of NABH, the cost of the boxes has been reduced to almost half the initial price. The new box is completely biodegradable also smaller in size and lighter in weight than the previously used plastic boxes which resulted in the reduction of the dispatch and courier charges too. Adding to this, NABH has come up with a very good branding plan in the same price where the logo and the details of NABH are printed on the outside of the carton box and is sent as shown in the picture. The cost has now been revamped to plastic free cylindrical packing which is 50% less per piece than previous one having NABH logos. Better packages work to provide the Gold Standard in secure, efficient and reliable carton closure.

Thus, through this initiative NABH has not only set an example but has also become an ambassador for GO GREEN INITIATIVES, "Plastic free world is also a choice but a commitment to the next generation."
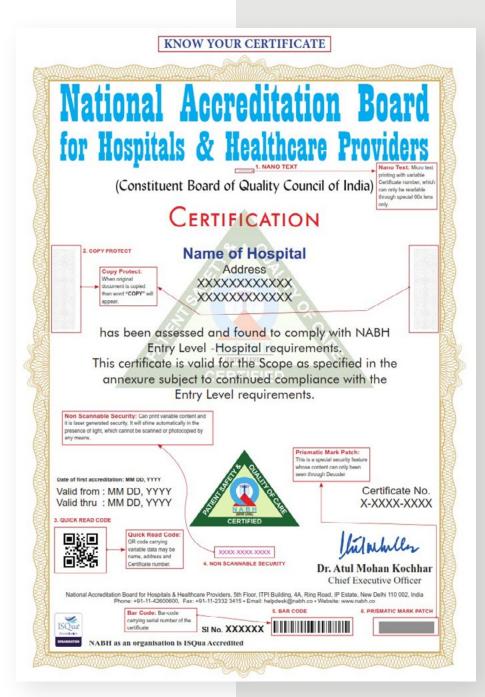

Branding With Substance
Secure Tamper Proof NABH Certificate

Fake certificates can damage the reputation of well-established organizations that have to observe strict rules when issuing certificates, and with industry estimates pointing to a 30-35% annual rise in the number of fake certificates in circulation, this is clearly a major concern.

Know NABH New Certificate With Above Security Features For Accreditation Program

Know NABH New Certificate With Above Security Features For Certification Program

Keeping the above in view, NABH has re-designated a secure certificate printing technology with security features that will protect certificate as well as safeguard the reputation of the organizations.

Re-designing of NABH Accreditation & Certification Certificates: The revised design has following Security Features:

- Nano Text: Micro text printing with variable Certificate number, which can only be readable through special 60x lens only

- Copy Protect: When original document is copied, word "COPY" will appear

- Quick Read Code: QR code carrying variable data may be name, address and certificate number

- Non Scannable Security: Can print variable content and it is laser generated security. It will shine automatically in the presence of light, which cannot be scanned or photocopied by any means

- Bar Code: Bar-code carrying serial number of the certificate

- Prismatic Mark Patch: This is a special security feature whose content can only be seen through Decoder

- Media: Polyethylene Terephthalate Non-Tearable and Waterproof media

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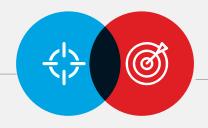itation programme for healthcare organizations. NABH has been established with the objective of enhancing health system & promoting continuous quality improvement and patient safety. The board while being supported by all stakeholders, including industry, consumers, government, has full functional autonomy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

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

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

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

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

NABH **Activities**

NABH Accreditation Programs

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

NABH Certification Programs

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

NABH International

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

Training & Education

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

For further details please contact:
National Accreditation Board of Hospital and Healthcare Providers
Quality Council of India

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

National Accreditation Board for
Education and Training

Strives to provide services to its customers in accordance with the national and international standard norms & guidelines and is committed to provide fair and equal opportunity to all the applicants with highest regard to impartiality, transparency, integrity and confidentiality.

BOARD UPDATES

nabet.qci.org.in

NABET

Formal Education Excellence Division (FEED)

Assessment and Evaluation Projects

STUDY ON SITUATIONAL ANALYSIS OF STREET CHILDREN, ASSAM

State Child Protection Society (SCPS) Assam issued a letter of intent to FEED-NABET in April 2022 to conduct study on situational analysis of street children in Assam. As of now, framework has been developed, Change Management Workshop was conducted in Guwahati for district authorities on framework & project intent. Also, a pilot project was conducted in Guwahati to assess probable hotspots for identification of Children in Street Situation (CISS).

Change Management Workshop with district authorities, Guwahati

Pilot Assessment for identification of CISS, Guwahati

CHILD RESCUE OPERATION, PAN INDIA

National Commission for Protection of Child Rights (NCPCR) issued a work order to FEED-NABET in the month of June 2022 to record observations of Child Rescue Operations at 75 locations. Presently, FEED-NABET has completed observation assessment at all the locations in the month of June 2022 and report is under development.

Assessor observing rescue with the team of district police officers & officials

STUDY THE IMPACT OF COVID-19 ON CHILDREN

NCPCR has signed an MoU with QCI in the month of February 2022 to study the impact of Covid on children with Special Focus on Girls and children with Special Needs. The questionnaire has been developed and pilot assessment for the same will be initiated in the month of July 2022.

TRAINING OF 560 TEACHERS UNDER CENTRAL TIBETAN ADMINISTRATION (CTA)

An MoU has been signed with Central Tibetan Administration to conduct online & offline workshops for 560 teachers

primarily focusing on Competency Based Education (CBE) in alignment with NEP-2020. Till now, 530 teachers have been trained on CBE through both virtual and offline interactive workshops.

Offline Workshop in Mcleodganj for school teachers under CTA

Outreach Activities

On June 25th, Time 2 Grow Media organized an education summit in Chandigarh for educationists & Principals. Ms. Madhu Ahluwalia, Senior, Advisor, QCI addressed 150+ participants on quality improvement initiatives undertaken by NABET in school education domain. The objective was to sensitize them about NABET School Accreditation framework, its implementation & benefits, grading framework and other quality improvement interventions and its impact.

Ms. Madhu Ahluwalia, Senior Advisor-QCI addressing educationists at Education Summit, Chandigarh

Awareness Workshops

PREPARING SCHOOLS FOR TRANSFORMATIVE SCHOOL-BASED ASSESSMENT (SBA) OF LEARNING VIS-À-VIS NEP-2020

- Module on Understanding of Holistic Progress Card (HPC)
- Module on SAFAL[1] & NIPUN[2]

NABET-QCI conducted several workshops in 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.

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

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor NABET)
- Dr Patanjali (Vardhman Mahaveer Open University)
- Dr Bhaskar (IASE, Kumayun University)
- Dr. Gaurang Tiwari (Accreditation officer, NABET)

AWARENESS WORKSHOPS ON ACCREDITATION STANDARD FOR QUALITY SCHOOL GOVERNANCE

FEED-NABET conducted Awareness workshops (both virtually & offline mode) on Accreditation Standard for Quality School Governance to spread awareness about the Standard.

Offline Workshop held in Coimbatore for SSVM Chain of Schools

Offline workshop in Guwahati, Assam

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.

Following were the takeaways of the programme:

- Understanding the requirements of accreditation standard
- Implementation of the requirements of accreditation standard
- Understanding best practices: Benchmarking and innovation
- Facilitation to prepare a Roadmap for accreditation

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor NABET)
- Dr. Senthil D. Kumar
- Col. Jaganathan
- Dr. Sheela Ragavan
- Dr. Sangeeta Gole
- Dr. Leena Pimpley

TRAINING SCHOOL ASSESSORS (TSA) WORKSHOP

FEED-NABET conducted TSA workshop in Delhi for individuals willing to develop capability for examining/ assessing schools with respect to requirements of Accreditation Standard.

Ms. Madhu Ahluwalia, Senior Advisor addressing TSA participants

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 assess schools on Accreditation Standard for Quality School Governance.

Following were the takeaways of the programme:

- Enable the participants to facilitate schools to establish self-assessment process periodically
- Understanding effective assessment mechanism and its compliance to the accreditation standard

Speakers:

- Ms. Madhu Ahluwalia (Sr. Advisor NABET)
- Dr. Leena Pimpley

Environment Division

Environment Impact Assessment Consultant Organization

Workshop on Quality Improvement in EIA Reports & New Dimensions from April 7-9, 2022, at NITTTR, Chandigarh.

Review Meeting - optimization and harmonization of EC conditions under the chairmanship of JS MoEFCC, on May 3, 2022 at MoEFCC, New Delhi.

Presentation and Discussion on the component pertaining to GIZ under the proposal on three-tier monitoring under the Chairmanship of Joint Secretary MoEFCC-on June 27, 2022 at Teesta Meeting Hall, New Delhi.
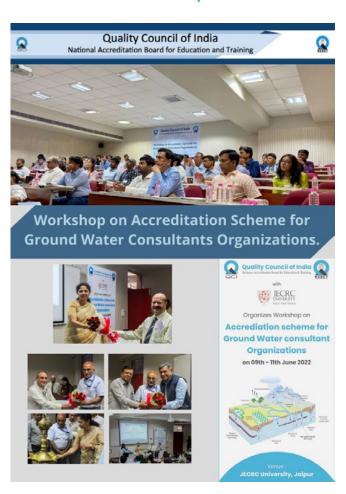

Presentation and Discussion on Framework document on Environmental Damage Cost Assessment prepared by NEERI under the proposal on three-tier monitoring mechanism-reg. on June 8, 2022.

A meeting under the chairmanship of Joint Secretary, Dr. Sujit Kumar Bajpayee, MoEFCC, to discuss the various methods adopted for calculation of environmental damage & remediation due to violation of Environmental norms on June 17, 2022 at Teesta Meeting Hall, MoEFCC, New Delhi.

Ground Water Consultant Organization (GWCO)

WORKSHOP ON SCHEME FOR ACCREDITATION OF GROUND WATER CONSULTANT ORGANIZATIONS, JUNE 09 - 11, 2022 (3-DAY NON-RESIDENTIAL), JECRC UNIVERSITY, JAIPUR

MSME Division

Webinar on Research & Development in Artificial Intelligence for Educational Institutes – 10th May 2022

No. of Participants- 180

Topics covered:

- Challenges in AI Model Development: Developing models in academia is different than developing models in the industry

- Importance of AI Infrastructure: AI compute technology is key to advancing algorithms and software

- Importance of real-world data to develop precise and accurate AI models: The data and feature engineering provide information necessary to optimize your model

- Planning end-to-end Deep Learning Research / Application development in the Universities: Expand the role of real-world data and AI infrastructure in academic research is needed

Webinar on End-User Computing Cyber Security Practices on June 30, 2022

No. of participants- 100

Topics Covered

- Understand the basic concept and technologies behind VPN and HySecure product

- HYID (MFA) - Product, Architecture, Technology and Authentication Types

- Zero Trust Network Access gateway with Built-in Endpoint host scan for device compliance by stricting device entry control to allow context-aware access from only authorized & compliant devices

- Accops HyLabs helps universities, educational institutes and L&D organizations create, manage and monitor virtualized ICT labs and provide real time access to the ICT enabled labs from any device, anywhere & anytime

- Secure Browsing with Internet Isolation by maintaining both Physical and Software Air Gap

21st VQC on Workplace Safety in MSME Enhance Productivity conducted on 27th May 2022

No. of participants- 300

Webinar on End-User Computing Cyber Security Practices on June 30, 2022

No. of participants- 100

Topics Covered

- Understand the basic concept and technologies behind VPN and HySecure product

- HYID (MFA) - Product, Architecture, Technology and Authentication Types

- Zero Trust Network Access gateway with Built-in Endpoint host scan for device compliance by stricting device entry control to allow context-aware access from only authorized & compliant devices

- Accops HyLabs helps universities, educational institutes and L&D organizations create, manage and monitor virtualized ICT labs and provide real time access to the ICT enabled labs from any device, anywhere & anytime

- Secure Browsing with Internet Isolation by maintaining both Physical and Software Air Gap

ACCREDITATION STANDARD FOR QUALITY SCHOOL GOVERNANCE

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

School Governance

Education & Support Processes

Performance Measurement & Improvement

BENEFITS OF ACCREDITATION

OVERALL

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

STUDENTS & PARENTS

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

SCHOOLS

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

MANAGEMENT

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

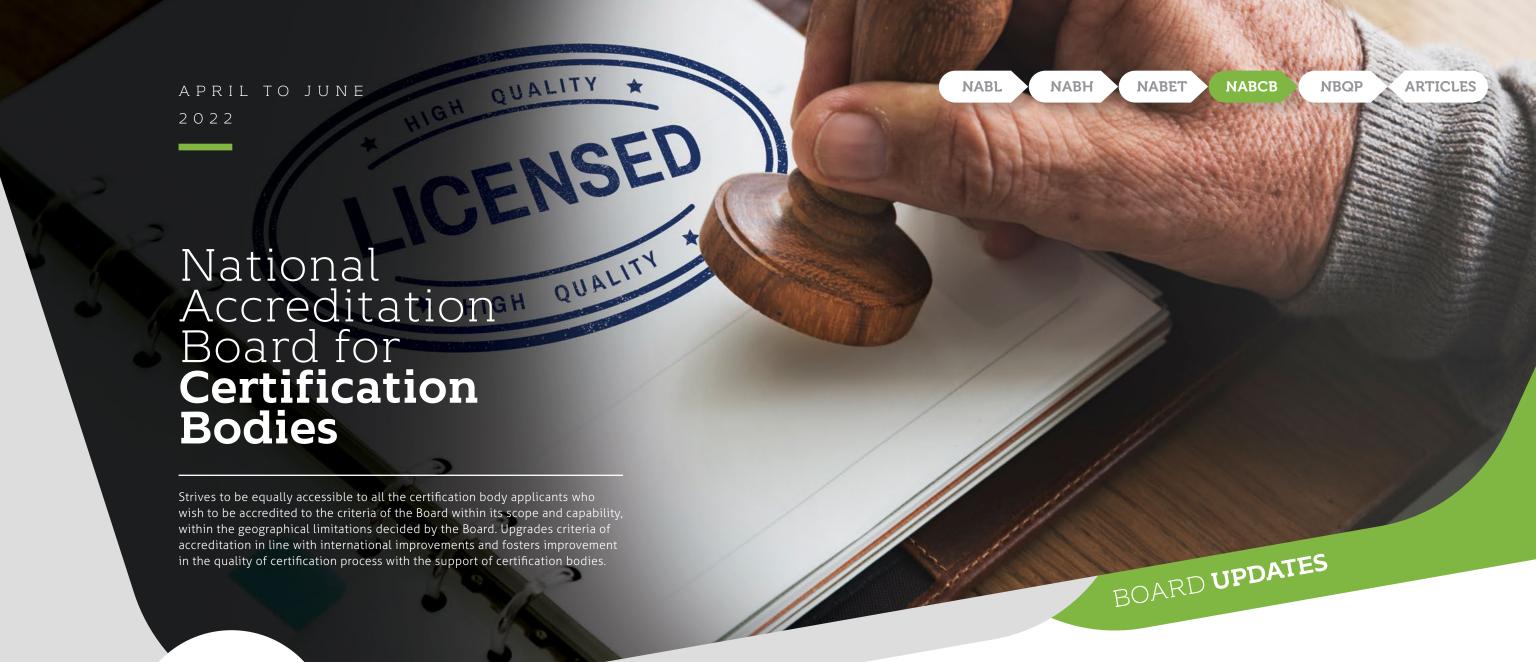**FEED-NABET has accredited and assessed 5,500+ schools till now in India and abroad.**

www.nabet.qci.org.in/   geetika.nabet@qcin.org   +91 98103 06844   6th Floor, ITPI Building 4 - A, Ring Road, I P Estate, New Delhi - 110002

National Accreditation Board for
Certification Bodies

Strives to be equally accessible to all the certification body applicants who wish to be accredited to the criteria of the Board within its scope and capability, within the geographical limitations decided by the Board. Upgrades criteria of accreditation in line with international improvements and fosters improvement in the quality of certification process with the support of certification bodies.

BOARD UPDATES

n a b c b . q c i . o r g . i n

NABCB SIGNS AGREEMENT WITH SERI FOR ACCREDITATION FOR R2 STANDARD

NABCB signs Agreement with SERI, USA to provide accreditation for R2 Standard Certification for Electronics Waste Recycling in accordance with R2 standard under Environment Management System (EMS).

SERI, USA is a global Scheme of R2 certification for Electronic Recycling Waste. SERI created the Electronics Sustainability Alliance as an opportunity to channel the power of businesses to make positive contributions toward electronics sustainability, with an end goal of removing all e-waste from the electronics industry.

R2 Certification comprises recycling of E-wastes like Lithium Batteries, TFT Panels, Laptops, Computers, CPU, Mother Board, Memory Card, Hard Drive, TV Screens, Refrigerators, Air conditioners, LCD Panels etc.

This has opened up as an opportunity for the Management system certification bodies to extend their accreditation scope by applying for NABCB accreditation to R2 Certification standard under EMS Scheme. Please refer the web link https://sustainableelectronics.org/join-the-mission/ for details on SERI Scheme owner.

UK-INDIA EODB WORKSHOP ON MARKET SURVEILLANCE, RAPID ALERT SYSTEMS AND REGULATORY IMPACT ASSESSMENT (RIA)

Under the aegis of UK's Foreign, Commonwealth & Development Office (FCDO) in partnership with the Government of India for Ease of Doing Business (EoDB) Programme, QCI/NABCB and BSI organised a UK-India Workshop on "Developing Framework for Effective Market Surveillance, including Rapid Alert Systems (RAPEX) and Developing Regulatory Impact Assessment (RIA) System - Sharing UK Best Practices" in four sessions conducted on 24, 25 March, 1 April and 11 April 2022.

The objectives of the events were:

- to facilitate development of a robust framework of Market Surveillance for India

- to learn the way in which Regulatory Impact Assessments were developed and used in government and regulatory agencies in the UK and facilitate development and use of an RIA system in India

- to understand the functioning of Rapid Alert Systems (RAPEX)

The welcome address was given by Shri Anil Agrawal (IPS), Additional Secretary, Deptt. for Promotion of Industry and Internal Trade (DPIIT); Ms. Yashodhara Dasgupta, Senior Policy Adviser, UK Trade, Economics & Prosperity, British High Commission, New Delhi; and Mr. Rajesh Maheshwari, CEO, NABCB. The virtual workshop saw active participation from Government Ministries/ Departments, Regulators, and Industry Bodies/ Associations of Conformity Assessment Bodies. The workshop was conducted by UK based experts of BSI led by Mr. Mark Gardiner, BSI. Well diversified sessions included topics like Market Surveillance, Regulatory Impact Assessment (RIA) etc.

NABCB CELEBRATES WORLD ACCREDITATION DAY 2022

The World Accreditation Day (WAD) is a global initiative established by the International Laboratory Accreditation Cooperation (ILAC) and International Accreditation Forum (IAF), celebrated on 9th June every year to raise the awareness on the importance of accreditation amongst all relevant stakeholders. National Accreditation Board for Certification Bodies (NABCB) and National Accreditation Board for Testing and Calibration Laboratories (NABL), the two constituent boards of the Quality Council of India (QCI) organized a physical event to commemorate the World Accreditation Day (WAD) on 9 June 2022 on the theme "Accreditation: Sustainability in Economic Growth and the Environment."

The inaugural session had presence of eminent dignitaries - Mr. Rajeev Kher, Former Commerce Secretary as Guest of Honour; Mr. Anil Agrawal, Additional Secretary, Department

for Promotion of Industry and Internal Trade as Special Address; Mr Adil Zainulbhai, Chairman, QCI and Dr Ravi P Singh, Secretary General, QCI.

Dr. Ravi P Singh in his welcome address highlighted importance of accreditation in improving the quality of infrastructure in India. He detailed the regulators relying on NABCB & NABL accredited bodies for the various activities. He stressed that the community of conformity assessment bodies feeds India to become Atma Nirbhar Bharart .

Mr. Rajeev Kher, in his address stressed that the economic entities play an important role in sustainability of environment. He mentioned that if we want to expand our presence in international market for trade i.e. Japan, Australia ,UAE, Canada etc, we need to produce an international quality product utilising high technology with high productivity, quality and proficiency . This could be only be achieved by accreditation and it will pave way to produce desired quality of product.

Mr. Anil Agrawal in his speech, stated that in year 2021-22, India exported $250 billion worth of services and merchandise exports of $422 billion. Majority of these services went to developed countries and India could do it only because of the acceptability of quality products in the global market. He stressed that to maintain India's presence in global market, we need to rely more on accredited conformity assessment bodies and these bodies must be competent to carry out the assessment in trustworthy and precise manner. He also mentioned that there is lot of improvement required in the accreditation system, however we can overcome those difficulties with our constant efforts.

Mr. Adil Zainulbhai in his Planery Video message emphasized that accreditation plays a vital role in global trade and sustainability. He urged the Accreditation Conformity Assessment Bodies to ramp up the ease of doing business,

global trade along with Atma Nirbhar Bharat with aim of sustainability.

The Joint Statement by IAF and ILAC Chair was read by Mr. N. Venkateswaran, CEO, NABL. The dignitaries then unveiled the NABCB promotional video which is now available on QCI-YouTube Page.The inaugural session concluded with Vote of Thanks delivered by Mr. Rajesh Maheshwari CEO, NABCB where he thanked all the eminent speakers for taking out their precious time and physically addressing the gathering and all the participants for their presence.

The inaugural session was followed by technical session with the focus on Accreditation: Sustainability in Economic Growth and the Environment and was Chaired by N. Venkateswaran CEO, NABL. The eminent speakers included Dr. K. P. Tripathi, Coordinator (Accreditation), Education Div., Indian Council of Agricultural Research(ICAR); Mr. K. Ranganathan, Sc. E &

DH, Central Pollution Control Board (CPCB); Ms. Ekta Agrawal, Assistant Director ,Directorate General of Civil Aviation (DGCA) and Mr. Arun Tripathi, Scientist G, Ministry of New & Renewable Energy (MNRE).

The deliberations by speakers, who are experts in their field, dwelled on topic related to role of accreditation in economic growth and environment in Indian context. More than 720 participants attended and 1000+ watched the event live.

NABCB PARTICIPATES IN 7TH ANNUAL NUTRITION INDIA SUMMIT

Ms. Varsha Misra, Deputy Director, NABCB participated in 7th Annual Nutrition India Summit organized from 28 - 29 April 2022. In her presentation she discussed the Role of Conformity Assessment and Accreditation. The event was attended by industry leaders and more than 100+ participants from different organizations attended the submit.

International News

CEO, NABCB ELECTED AS DIRECTOR ON THE BOARD OF INTERNATIONAL ACCREDITATION FORUM
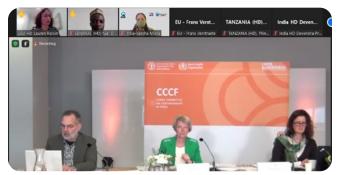

Mr. Rajesh Maheshwari CEO, NABCB elected as a Director on the Board of IAF to represent Low & Medium Income Economies. He also becomes a member on the IAF Executive Committee (EC), the Joint Executive Committee (JEC) of IAF and ILAC, and the Co-Chair of the IAF Accreditation Body Information Exchange Group (ABIEG). It's a proud moment for QCI-NABCB as it continues to occupy position of leadership within International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC).

NABCB OFFICERS PARTICIPATE IN APAC MEETING

NABCB officers participated in various meetings of Asia Pacific Accreditation Cooperation (APAC) held in month of May 2022. The meeting was attended by Mr. Rajesh Maheshwari CEO; Mr. Ajay Sharma, Joint Director; Mr. Anand Deep Gupta, Joint Director and Ms. Varsha Misra, Deputy Director. In the meeting members were updated about various development in various ISO standards like ISO/IEC 17020:2012, ISO/IEC TS 17021-13:2021, ISO/IEC TS 17021-14:2022, ISO/IEC 17030:2021,ISO 22003-1:2022 and ISO/IEC 17024:2012.

NABCB PARTICIPATES IN 15TH SESSION OF CODEX COMMITTEE ON CONTAMINANTS IN FOODS CCCF15

15th session of Codex Committee on Contaminants in Foods (CCCF15) was held virtually in various session in month of May 2022. The hosts of working groups were Canada, European Union, United States of America, Brazil, and Gracia Brisco Verna Carolissen from Codex Secretariat. The objective of the meeting was to give an opportunity for Codex Members and Observers to consider suggestions for the prioritization of contaminant standards and make recommendations for consideration by the plenary session at CCCF15 2022. Ms. Varsha Misra from NABCB participated in

the meeting. The meetings was attended by more than 400 participants from 80 countries.

NABCB PARTICIPATES IN CASCO PLENARY MEETING

36th CASCO Plenary Meeting was held from 26 to 28 April 2022 with the main objective to discuss and seek inputs from the members on the review of the CASCO Structure and to have a follow up dialogue sessions on Regional Engagement with CASCO members. Mr. Rajesh Maheshwari, CEO, NABCB and Ms. Varsha Misra, Deputy Director represented NABCB in the meeting.

WEBINAR ON IAF CERTSEARCH PORTAL

NABCB in partnership with the The Quality Trade, Australia organized a virtual webinar on IAF Certsearch Portal on 12 May 2022 to facilitate the accredited certification bodies for updating certificates issued to their clients on IAF CertSearch database. Mr. Nigel Johnston, CEO, Quality Trade, Australia who is responsible for managing this database as a whole on behalf of IAF, delivered a presentation. He briefed the participants about the various analytics present in the database, which helps certification bodies to know about the global scenario of management system certificates issued across the world. More than 50 participants attended the webinar.

IAF DATABASE PRINCIPLES - WEBINAR FOR APAC MEMBERS & THEIR CB REPRESENTATIVES

Two webinars for update on IAF Database Model & Principles were organized consecutively on 4th March & 13 April 2022 for IAF and APAC members & their CB Representatives. The webinar was attended by more than 100 participants from different APAC economies. IAF Database Management Committee (DMC) chair Mr. Matt Gantley addressed the APAC

members and gave update on the proposed changes in IAF CertSearch Database.

NABCB Monthly Webinars

In order to increase awareness about various NABCB accreditation schemes, a series of monthly webinars were organized from April – June 2022 with an objective to increase awareness about various NABCB schemes and the benefits of using NABCB accredited conformity assessment bodies amongst Government organizations, Regulators, Industry, Conformity Assessments Bodies (CABs) and other stakeholders.

ROAD TRAFFIC SAFETY MANAGEMENT SYSTEMS (RTSMS)

Road Traffic Safety (RTS) is a global concern. Approximately 1.3 million people die each year as a result of road traffic crashes around the world and this level is rising. To adopt a Safe System approach to RTS, NABCB organized a webinar on "Road Traffic Safety Management System Scheme (RTSMS)" for all its stakeholders that are important for road traffic safety. The programme covered the insights into the importance of Road Traffic Safety scheme , key requirements of ISO/IEC 17021-1 and ISO 39001 standards. The speakers for the webinars Mr. Abhay Pathak, NABCB Assessor, Ms. Poonam Gupta, Assistant Director and Ms. Shivani Mishra, Accreditation officer from NABCB. The webinar was attended by 225+ participants.

PERSONNEL CERTIFICATION SCHEME

NABCB and NBQP jointly conducted a webinar on Personnel Certification Scheme and NABCB Accreditation. Personnel Certification has become an important element of

verifying the competence of an increasingly mobile and global workforce. Webinar intended to highlight the need of personnel certification in India. The purpose of the programme was to give insights about personal certification schemes, key requirements of the standard ISO/IEC 17024 and to explain the process of NABCB Accreditation for prospective Personnel Certification Bodies (PrCB) along with stakeholder perspective on personnel certification. The speakers for the webinars were Mr. S Krishnamurthy, NABCB Assessor; Ms. Varsha Mishra, Deputy Director, NABCB; representatives from PrCBs like Mr. Yogesh Kothari, Academic Director, Indian Institute of Paramedical Sciences; Mr. V. Manoharan, Chief Controller of Exam, National Certification Board (NCB), Indian Society for Non-destructive Testing (ISNT) and Mr. R. Giridharan, Alsta Institute of Welding Technology Pvt. Ltd. (AIWT). The webinar had presence of industry experts i.e. Mr. Pradeep Sinha and Mr. Javed Afaque. The webinar received an overwhelming response of 270+ participants.

FOOD SAFETY MANAGEMENT SYSTEM

NABCB conducted a webinar on Standard ISO/IEC 17021-1:2015 with a focus on ISO/TS 22003:2013 - Food Safety Management Systems on 27 June 2022. The objective was to sensitize the Food Industry, Government / Regulators (Central / State), Conformity Assessment Bodies and other stakeholders about NABCB accreditation programs and its benefits of using NABCB accredited Conformity Assessment Bodies. The webinar provided insights on the requirements of ISO/IEC 17021-1:2015 & ISO/TS 22003:2013 w.r.t. establishing Food Safety Management System including requirements of IAF MD16:2015. The webinar was attended by 160+ participants, which comprised overseas participation from various countries e.g Bhutan, South Africa, UAE, Namibia, Zimbabwe & Zambia etc.

INSPECTION BODIES SCHEME

NABCB organized webinars on Inspection Bodies Accreditation Scheme every month from April- June 2022. The webinar 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 speakers for the webinars were Mr Ajay Sharma, Joint Director, Mr. Anand Deep Gupta, Joint Director and Ms. Chinmayi Salooja, Accreditation officer from NABCB. NABCB received an overwhelming response and more than 200 participants attended, including participants from countries like Jordan, Tunisia, Philippines, Nepal, Kenya, Philippines, Bhutan etc.

National Board for **Quality Promotion**

Strives to promote application of quality management standards and statistical quality tools with an objective of enabling industry, to improve their competitiveness, with specific focus on SME sectors. Focusses on empowering the consumers to demand quality and consequently creating a back-pressure on suppliers to ensure quality of their products and services.

BOARD **UPDATES**

NBQP

nbqp.qci.org.in

"Brainstorming on Quality Challenges and Futuristic Solution"

ABOUT THE WORKSHOP

QCI is endeavouring to develop focussed upgradation programs (functional/hierarchal) linked to key critical concerns in Operations Management for competitiveness and Quality. These issues appear as pain areas of MSMEs during their quest for sustainable profitable growth.

QCI has started interactions with MSMEs through their Industry associations/OEMs to sense their needs and then quantify their requirements for the desired maturity of knowledge that can help in actionable ideas. Dividing the knowledge into four pillars of Management Accounting, Marketing, Purchase and Operations will help us provide enough tools for management practise that may be augmented with information technology needs. Our mandate is to enhance the knowledge of organisation and the supply chains they operate in, to a level of maturity wherein they are on a path of continuous improvement.

TAKEAWAYS

Our courses, training and mentoring programs are expected to create enough functional knowledge across the whole spectrum, be it from implementing an ERP to adding new software tools that will help transition to industry 4.0. New management practises are evolving for the Volatility, Uncertainty, Complexity and Ambiguity (VUCA) world that will

need to adopted by MSMEs and QCI will be a beacon and a custodian of knowledge in these areas so that most of the industry has easy access to knowledge that will transform business performance.

- 15th April 2022 with Kirloskar Pneumatic Co Ltd Pune, Maharashtra, India

- 19th April 2022 with Integrated Association of Micro, Small and Medium Enterprises of India (IamSME), Faridabad

- 22nd April 2022 with Engineering Exports Promotion Council (EEPC India), New Delhi

- 4th May 2022 with Federation of Small & Medium Industries (FOSMI), West Bengal

- 27th May 2022 with Indian Industries Association (IIA), Greater Noida

- 27th June 2022 with MSME Development Forum, New Delhi

Attended by 25+ MSME industry associates (each session)

Webinar Title

Challenges and Potential Responses for a Better Future of Quality

Date: 13th April 2022

About the Program:

Over the last two decades interest in Quality has steadily reduced. Why? Some key factors include limited impact,

inability to expand the subject, not embracing technology, not changing with the times and more. All these are challenges to a better future of quality.

Key Discussions:

What can be done now and over the next few years to overcome these challenges and reverse the downward trend.

Attended by 310 Participants

Webinar Title

Getting to the Bottom of the Cause: Incident Investigation Methodologies

Date: 29th April 2022

About the Topic:

Getting to the Bottom of the causes through a range of Root Cause Analysis techniques, explaining the various Steps, Tools with lucid examples to demystify Incident Investigation.

Root Cause Analysis (RCA) is a collective term that describes a wide range of approaches, tools, and techniques used to uncover causes of problems. RCA is the process of finding the underlying cause for an effect we observe or experience. In the context of failure analysis, RCA is used to find the root cause of incidents. to find the primary cause of the problem, so that you can determine what happened, why it happened and figure out what to do to prevent its recurrence

Objectives & Key Takeaways:

A sound understanding of Root Cause Analysis methodologies and simple ways of getting to the deep-rooted systemic causes to address them would enable preventing incident recurrence.

Attended by 359 Participants

Webinar Title

Cleanliness through Hygiene: Good Health -> Great Life-

Date: 07th May 2022

About Topic:

Hygiene is the practice through which people maintain or promote good health by making themselves and their surroundings clean, cleaning and - when needed - disinfecting surfaces, hands, units, surroundings and items of personal use in order to break the chain of infection, all contribute to hygiene. It is important for maintaining both physical and mental health. In people with poor personal hygiene, the body provides an ideal environment for germs to grow, leaving it vulnerable to infections.

Objective & Takeaways:

Cleanliness gives rise to a good character by keeping body, mind, and soul clean and peaceful. Maintaining cleanliness is the essential part of healthy living because it is the cleanliness only which helps to improve our personality by keeping clean externally and internally.

Attended By 150 Participants

2-day online training prog QMS - IRIS Certification - ISO/ TS 22163:2017 Implementation Insights

Date: 21st and 22nd May 2022

About the Topic:

IRIS stands for International Railway Industry Standard. It is a globally recognized standard unique to the railway sector for the evaluation of management systems.

IRIS Certification system is based on technical requirements (ISO/TS 22163) and conformity assessment (including assessment methodology and a common certification process). The aim of IRIS is to create a culture of quality that brings benefits to all stakeholders in the rail supply chain.

The ISO/TS 22163:2017 contains the requirements of the ISO 9001:2015 Standard and the supplemental rail-specific requirements.

Objectives & Key Takeaways:

- This will help the MSME sector to support the Make in India Program and they compete with international players on Rail and Metro projects

- By participating in this online training, participants will be able to:

- Understand the IRIS Certification Process

- Introduction about ISO/TS 22163 Requirements

- Explain how the additional requirements can be interpreted and implemented

Attended by 13 Participants

Webinar Title

Understanding 5S in Business Operations Management

Date: 05th June 2022

About Topic:

Making a business operation lean takes many years and goes beyond shop floor to impact every aspect of business. This webinar shall introduce what 5S will impact in the whole operations of a company and how it impacts lean management.

Objective & Takeaways:

- Clear understanding of 5S
- How can departments be impacted by 5S
- How does 5S apply to management & administration
- Future steps in practice of 5S

Attended by 317 Participants

Webinar Title

Yoga Day- Take the Journey to your innerself

Date: 21st June 2022

About Topic:

Yoga is considered as one of the vital keys to healthy life and source of happiness, that helps combating stress, anxiety and live a quality of life. So, for those who haven't been able to make time for fitness, a session of Yoga can be a good way to at least get started.

Objective and Takeways:

Based on ancient Indian philosophies of physical, mental and spiritual practices, yoga is a very popular form of exercise across the world. With unforeseen situations taking place around the world, including a massive one like COVID, the practice of yoga will help us to work through our own daily mental and physical experiences.

Attended by all the staff members of QCI

Webinar Title

"Nurses: A Voice to Lead – Invest In Nursing And Respect Rights To Secure Global Health" – International Nurses Day

Date: 12th May 2022

About the Topic:

The program is in recognition of Nurses, May 12 as International Nurses Day along with the birth anniversary of Florence Nightingale, the founder of modern nursing. International Nurses Day is observed to honour nurses as Nurses are the essential caretakers for a prosperous society. During this pandemic, their extraordinary contribution has proved to inspire their dedication and hard work towards nursing.

Objectives & Key Takeaways:

- The webinar is an attempt to focus on the International Council of Nursing theme of 2022
- After the webinar, participants will be able to understand that investing in nursing by empowering the nurses will lead to a better tomorrow

Attended by 100 Participants

Webinar Title

Role of Accreditation in Raising the Bar of Quality & Patient safety

Date: 09th June 2022

About Topic:

June 9th 2022 marks World Accreditation Day which is a global initiative established by ILAC (International Laboratory Accreditation Cooperation) and IAF (International Accreditation Forum) to promote the value of accreditation. Accreditation is an internationally recognized evaluation process used to assess and promote efficient and effective quality for patient care and patient safety. The evaluation of health care organization's compliance is done against the pre-established performance standards which are focused on the safety and quality care of the patient.

Objective:

Patient safety is the cornerstone of high-quality health care system. In today's scenario having access to health care is not enough. The patients who enter the health care system whether a clinic, a hospital, or any healthcare organization, need to be confident that they will receive care that is safe, effective, and consistent with the latest clinical evidence. The webinar is an attempt to focus on the understanding how Accreditation helps in raising the bar of Quality & Patient safety through its comprehensive evaluation process.

Key Takeaways:

- How Accreditation helps the health care organization in raising the bar of Quality & Patient safety?
- The challenges that the health care organization encounter in their accreditation journey and the way forward

Attended by 100 Participants

Webinar Title

Personal Certification and NABCB Accreditation

Date: 28th June 2022

About the Topic:

Personnel certification attests that an individual possesses the skills and knowledge required for a specific field. The personnel certification scheme provides a benchmark of professional excellence and help empower the professional with the real-world qualifications needed to perform the work safely and effectively.

This program aims to highlight the need for such personnel certification of schemes in India. The ISO/IEC 17024 standard sets the requirements and the framework, at a global level, for the bodies that are attesting these individuals also known as Personnel Certification Bodies. This program will also provide details about the benefits of using ISO/IEC17024:2012 accredited Personnel Certification Bodies (PrCB) by NABCB and process of obtaining NABCB accreditation as per the standard.

Objectives & Key Takeaways:

The purpose of the program is to give insights about personal certification schemes, key requirements of the standard and to explain the process of NABCB Accreditation for prospective Personnel Certification Bodies (PrCB).

Attended by 277 Participants

Workplace Safety in MSME Enhances Productivity

Date: 27th May 2022

Time: 10:30 onwards

About Topic:

MSMEs have reduced accidents by 10% with good lighting and organising the workplace. MSMEs have saved 20% production time by improving ergonomics and workplace safety.

Specialist speakers from the Indian government (DGFASLI, QCI), ILO and industry including an award-winning factory part of the ILO SCORE Programme.

—— Registration link ——
https://bit.ly/3sHuJGd

OBJECTIVE

To make factories a safe place to work that will improve professionalism and labour productivity in MSMEs.

KEY POINTS OF DISCUSSION

- Benefits of Lean Manufacturing in scheme of MoMSME

- Increasing operational efficiency to remain competitive

- A case study of an MSME that has improved OSH in their factory resulting in business benefits.

- Preventive maintenance of machines prevents accidents and improves productivity.

- Role of OSH in improving the quality of the product.

VQC
VIRTUAL QUALITY CONCLAVE

ASHISH GUPTA (NBQP)   9999750904   ashish.nbqp@qcin.org

21st VIRTUAL QUALITY CONCLAVE

The conclave aimed to make factories a safe place to work that will improve professionalism and labour productivity in MSMEs. The key points of discussion were based on increasing operational efficiency to remain competitive. The Occupational Safety and Health (OSH) role in improving the product quality and preventive maintenance of machines that prevent accidents and improve productivity besides deriving benefits in Lean Manufacturing (scheme of MoMSME). The conclave welcomed specialist speakers from the Indian government (DGFASLI, QCI), ILO and industry including an award-winning factory part of the ILO SCORE Programme.

Inaugural Session

The conclave was hosted by Ms Pooja Shukla, Assistant Director, NBQP. She underlined the facts about the accidents and deaths caused in the factories, besides every single accident in MSME impacts the livelihood of the people involved. All these facts indicate the pertinent need for sensitising a wider awareness of this theme as it will not only create awareness for a safer workplace but also enhance productivity and efficiency in MSMEs.

Welcome Address by **CEO, NBQP, Mr C.K Biswas**

Mr C.K Biswas, CEO, NBQP extended a warm welcome to the esteemed speakers as well as the delegates. Besides giving an overview of Quality Council of India and its boards, he further elaborated the theme of the conclave, highlighting the issues faced by the micro-enterprises in terms of machines, manpower and condition of the workplace. The majority of MSMEs are unable to meet the basic safety standards that is a major concern for human safety. Appropriate knowledge, and financial stance besides top management commitment is the need of the hour to address this issue. Mentioning the adverse conditions in which workers work for several hours, Mr Biswas suggested that every employer has the responsibility for its employee's safety and the safety aspect should be given topmost priority. The top management is responsible for safety enhanced culture in the factories. Lack of awareness, training and financial constraints are a few of the barriers mentioned by Mr Biswas that restrict a suitable work environment.

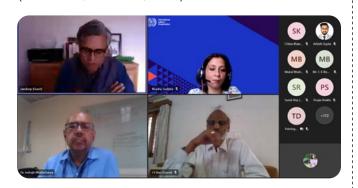Introduction Address by, **CEO & Co-Founder, Safe In India Foundation: Mr. Sandeep Sachdeva**

Mr Sachdeva set the tone of the conclave by introducing the audience to the theme of the conclave and the utmost necessity to spread awareness on safety measures in MSME. He stated that a better understanding of Occupational Safety and Health (OSH) and strategies are needed to bring a change in the workplace of MSMEs in our country. He mentioned that the opportunities like these will help the key stakeholders to plan better safety measures without hampering the cost-efficiency.

Emphasizing the importance to drive Workplace safety in manufacturing, he further reiterated that in the wake of Environment, Social and Governance (ESG) reporting becoming mandatory for 1000 top industries in our country; the culture of its reporting needs to percolate down to the MSMEs.

Technical Session

Benefits of Lean Manufacturing in scheme of MoMSME
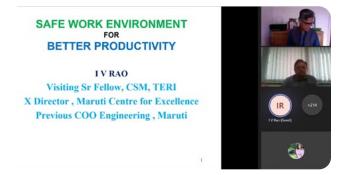
Speaker: Dr Indrajit Bhattacharya (Director, NABET, QCI)

Dr. I. Bhattacharya, National Accreditation Board for Education and Training (NABET), Quality Council of India started his presentation with a short video giving an introduction to lean manufacturing. He then explained that Lean manufacturing is a production method aimed primarily at reducing non-value-added wastages within the production system. He then described the 8 forms of waste removal that Lean manufacturing practices envisage continuously removing that are unnecessary transportation, inventory, motion, waiting, overproduction & proc, definition and wasteful skills. Waste is seen as anything that do not add value in the manufacturing process.
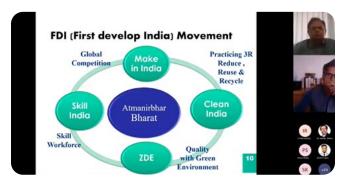
Dr. Bhattacharya further explained the benefits of lean tools and techniques and how these tools will help in enhancing workplace safety. A few case studies helping the audience to understand the importance of lean manufacturing practices were further discussed. In concluding his presentation Dr Bhattacharya talked about the future of lean manufacturing, he highlighted how safety can be looked as an investment and not as a cost to the MSMEs, besides driving labour productivity. He further reiterated that 'Workplace safety' should be rephrased as 'Occupational Safety and Health' that falls under ISO 45001 for which Conformity Assessment Bodies (CABs) are accredited by National Accreditation Board for Certification Bodies (NABCB), under QCI.

How can OSH improve the quality of the product

Speaker: Mr. I.V Rao (Ex-Director, Maruti Suzuki Center for Excellence)

During his session, Mr I.V Rao talked about a safe work environment for better productivity;. emphasising the customer needs and its importance. He stated that the worker is the most important stakeholder who works for the product served to the customer, hence, the safety assurance of the worker helps in satisfying the customer in a manner. The organization should not take the safety of the worker as an additional cost but uphold it as a paramount importance. The peace of mind required by the worker to produce standard products can only be ensured by an accident-free work environment.

He further discussed his personal experience of fire accidents and the role of owners in such situations. Accidents affect the whole functioning of the organisation. Highlighting the risk of improper designs, he stated that it is pertinent to focus on the quality of the designs as well.

Driving the need for electrification of vehicles, he pointed out that MSMEs should gear up to face the challenges and grab the opportunity to create a safe workplace with the adaption of electric mobility and new technologies. He also explained the role of government in providing a safer workplace environment.
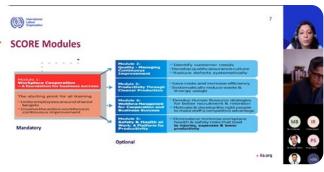
Increasing operational efficiency to remain competitive
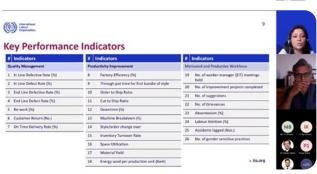
Speaker: Ms Sudipta Bhadra (Chief Technical Officer, International Labour Organisation - ILO)

Ms Bhadra detailed to the participants about the Sustainable, Responsible and Competitive Enterprises (SCORE) program. She explained the relevance of SCORE in enhancing operational efficiency. SCORE helps the small enterprises to grow and contribute to the creation of more and better jobs by improving their competitiveness through better quality, productivity and workplace practices.

Ms Bhadra discussed the internal challenges of MSMEs and also explained the SCORE module. SCORE is particularly relevant for MSMEs facing internal challenges affecting their market competitiveness such as quality, productivity, energy-inefficient production practices, environmental pollution, production waste, health and safety or human resource management. She also discussed the benefits of the SCORE program and talked about low-cost solutions for small enterprises to increase their operational efficiency. Ms Bhadra concluded her session with a video giving an introduction to SCORE module 5 on safety and health at work.

A case study of an MSME that has improved OSH in their factory resulting in business benefits

Speaker: Mr. Mukul Bhatia (Director, Champion Components Pvt Ltd)

Giving an introduction to his organization, Mr Mukul Bhatia discussed the case studies with his personal experiences. He informed the audience that after implementing the SCORE program, they have been able to record increased productivitybesides deriving tangible benefits of the program. He also showcased some of the pictures comparing the before and after pictures of his business including gas safety, electric safety, storage facility, etc. Mr Bhatia suggested that MSME owners never compromise with safety as it will indirectly benefit them by enhancing the productivity of the worker. Safety, maintenance and productivity are linked together. He further explained the maintenance and its benefits. Mr Bhatia talked about IS standards; ISO and MSME and their cost impact.

He concluded his session by highlighting the role of government in future endeavours such as toning down versions of standards, safety questionnaires, and self-certification for MSME, besides emphasising safety as a necessity and not an option.

Preventive Maintenance of machines prevents accidents and improves productivity

Speaker: Mr. Sumit Roy (Director, RLI Faridabad)

Mr Sumit Roy focused his session on increasing the efficiency and productivity of the machines. According to him, machines were made to reduce the burden and manage the work on time but non-maintenance of the machines will make it difficult for the workers to work efficiently. He further discussed the accidents caused due to poor maintenance of the machines. Mr Roy emphasized the methods of preventing such accidents by maintaining the quality of the machines and regular maintenance of the same as it is learnt that machines prevent accidents and improve productivity.

Mr Roy also explained the different aspects of preventive, predictive and breakdown maintenance. He explained the cost factors of these methods as well. Further, he discussed a few case studies that indicated the practical scenarios of accidents caused due to poor maintenance of machines in the factories. He briefly explained the lessons that can be learnt from the different case studies.

In conclusion, Mr Roy stated that proper machine safeguarding measures allows organizations to lower their operational costs by avoiding the costs of an accident, while also increasing the productivity & morale of the employees.

Vote of Thanks

Dr. Indrajit Bhattacharya, Director, NABET

Dr I. Bhattacharya expressed his gratitude for such a successful conclave. He thanked the Safe In India (SII) organisation for partnering with QCI for this initiative to spread awareness about workplace safety in MSME.

He also expressed his gratitude by thanking all the esteemed speakers who shared their views for enhancing productivity along with driving safety for the workers. He also thanked the CEO , NBQP and SII for enlightening the participants about the theme of the conclave. Dr Bhattacharya also acknowledged entire NABET, NBQP and the QCI - IT & media team for coming together to make this event an accomplishment.

Key Recommendations:

- Safety is an investment and will be beneficial to the MSMEs
- Enterprises should be updated with the current technology
- Owners should prioritise the safety of their workers
- Machines maintenance prevents accidents and improves productivity

Program Data

MS Teams	10.30 AM to 1 PM	630	303	104	94.3%
Technical Tool used for Conclave	**(2 hrs.30 min)** Duration of Conclave	No. of Participants Registered	No. of Participants Attended	No of the Participants who have submitted the feedback	Overall Rating of the VQC

QUALITY INDIA

22nd VIRTUAL QUALITY CONCLAVE

Inaugural Session

The conclave was hosted by Ms Pooja Shukla, Assistant Director, NBQP. She underlined the facts about the technological advancement at an unprecedented pace and the drone space in India is also catching up with that, gaining considerable momentum and their use has been gradually rising in various applications whether it is aerial cinematography land surveys, agriculture & mining activities or mapping national highways and railway tracks.

Recognizing the critical role of this sector, she mentioned that the application ranging from civil to defence purposes the Government has been proactively creating a conducive ecosystem through industry-wide reforms, transparency in regulations and inclusion of the Drone Sector under the PLI scheme.

She precedes to welcome the speakers and guests for the Inaugural of the conclave.

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

Dr Pande appreciated the joint efforts of PADD and NBQP, QCI. He also gave a brief about the Project Analysis and
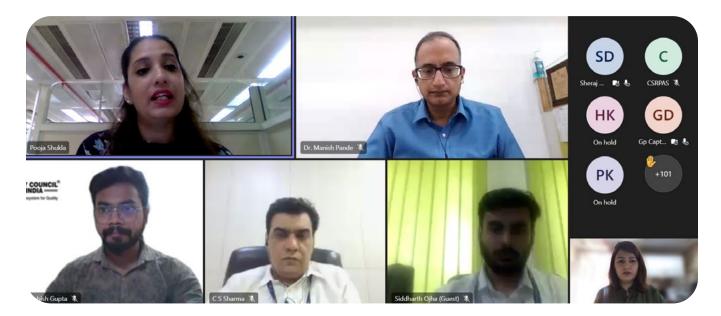
Documentation Division (PADD) working on CSUAS scheme for this sector. He introduced the primary objective of the conclave. He further welcomed Mr. Amber Dubey, Joint Secretary, Ministry of Civil Aviation (MoCA) for his keynote address.

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

Mr Amber Dubey highlighted the need for this conversation about this scheme for mass awareness. He thanked QCI for organizing this conclave which will help in spreading knowledge about this sector.

Vote of Thanks by **Mr. C.S Sharma, Jt. Director & Head – PMU (UAS), PADD, QCI**

Mr Sharma expressed his gratitude to the JS, MoCA, Mr Dubey and other panellists as well. Highlighting the points mentioned by Mr Dubey and Mr Pande, he talked about the CSUAS scheme, assuring the stakeholders to enhance the capabilities and speeding up the process without compromising any quality norms. Briefing about the technical sessions ahead, Mr Sharma requested the participants to write any query in the chatbox which will be discussed after each session.

Drone Certification Scheme through Certification Bodies

Speaker 1: Mr. C. S. Sharma (Joint Director & Head – PMU (UAS), PADD, QCI)

Drone Scheme – Certification Process

Mr C.S Sharma presented the role of Quality Council of India (QCI) & PADD division in the Drone certification process. He gave an overview of the division's work and the background of the certification schemes.

He stated that the aim of this certification scheme is to ensure safety and security requirements for drones and allow for their certification. Mr Sharma explained the steps of the whole process as well, he detailed the certification process for UAS with examples. The procedure of the Type Certification (TC) involves the Application review, Preparation and planning for stage 1 & 2 evaluation, testing of samples, technical review of the report, the decision on SOC, Submission of SOC pack to DGCA, closure of gaps (if any) etc., the final issuance of the type-certificate is done by DGCA, they can suspend/withdraw or renew the certificate.

The TC is issued by DGCA for a particular tone model to a particular manufacturer. If the manufacturer wishes to sell any different model, they need to apply the TC separately for that model. The validity of the certificate is five years. After enlightening about the process of certification, Mr Sharma highlighted the initiates by QCI under CSUAS. QCI is in touch with different stakeholders from various industries like academics, regulatory bodies or end-users etc and gets the feedback from the same to be in the same line with the stakeholders.

Moving forward, Mr Sharma discussed the current status of the scheme; the first type certificate was issued to IoTechWorld avigation on 13th June 2022, the status of SoC, Type Certificate and total applicants, previous and upcoming awareness events such as training, sensitisation program,

VQCs etc were stated. Mr Sharma concluded his presentation by giving a brief about the technical session and introducing the speakers of the session.

Speaker 2: Mr. Sriparn Saurabh (Engineering Manager, Energy Services)

Drone Certification Scheme through UL India

Mr Sriparn Saurabh started his presentation by giving a brief history of the Underwriters Laboratory (UL India), UL comprises two distinct organizations with one common mission. The non-profit organization develops standards, conducts research, and focuses on education and outreach. The commercial organization offers testing, inspections, certification and advisory services along with software as a service (SaaS) solutions. He also included the journey of UL in the UAS scheme in the session with the current status of the application. He also mentioned that before the application in the digital platforms, there should be full preparation.
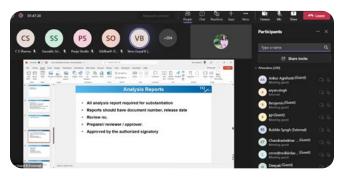
Given the future aspect of the scheme, Mr Saurabh talked about the need for In-depth training on Drone components & functionalities- UL 3030 standards / ISO 21384. He also wished for UL India to work further with QCI and DGCA to develop a compliance checklist for incorporating alternate components. He stated that while the Drone Legislation almost always progresses toward a more permissive approach to regulation, new vital infrastructure may aid in the transition's effectiveness. He concluded his session with a few suggestions for the OEMs including the testing, documentation and process.

Speaker 3: Mr. Venugopal (Assistant General Manager, TQ Cert Service Private Limited)

Drone Scheme – Introduction about TQ Cert

Mr Venugopal gave a brief about the TQ cert Service Pvt. Ltd. It is recognized as one of the world's leading certification and Inspection organizations. It is a subsidiary of TATA projects and a TATA group company with a presence across 100 countries. He also gave an introduction to the various services provided by TQ Cert.

Talking about the UAS certification, he explained the process of certification with a UAS SOC flow chart. He

briefly highlighted the challenges in the application review process. Mr Venugopal also explained the guidelines for the submission of the documents to aware the applicants about the process, he also gave a list of the mandatory documents that need to be submitted. He also overviewed the areas in which the Original Equipment Manufacturers (OEMs) need to be careful while submitting the application including the design documents, Analysis reports, test procedures, test reports etc. He also discussed some general points to be considered by the OEMs.

He acknowledged the areas in which the challenges can be solved with the right procedure.

The session was concluded with the questions by the participants which were addressed by the esteemed speakers.

Certification Scheme for Unmanned Aircraft System

Moderator: Mr. Smit Shah (President, Drone Federation of India)

The session was moderated by Mr Smit Shah, President, Drone Federation of India (DFI), he introduced the session topic to the participants and swiftly introduced the speakers of the session.

Speaker 1: Mr. S.A. Razack (General Manager (Retd.) , Quality Assurance, Hindustan Aeronautics Limited)

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

Mr Razack explained the Unmanned Aircraft System (UAS), An unmanned aircraft which is piloted from a remote pilot station. Clarification, category and type, dimension and life of UAS were briefly discussed by Mr Razack in different parameters. Other than that, he touched on the different parameters for General, Performance, Powerplant, Structure, Material and Construction.

- General compliance requirements (such as weight, CG limits, dimensions in compatible configurations, the life of drone, etc.)

- Performance requirements (such as operating speed, range, endurance, operational altitude, ceiling height, pitch for safe operation, stability and control)

- Powerplant (like engine installation, fuel leakage, flight limit loads, strength and shock absorbing mechanism)

- Overview of the structure and material type for instance fabrication method, ID plate etc.

Talking from his personal learning during the assessment, Mr Razack highlighted the expectations from various manufacturers during the assessment process. He said that the overview of compliances to the company's Quality Management System, knowledge of regulatory requirements, UAS certification scheme, Manufacturing and related functions are the important factors to be considered by any manufacturer. The use of UAS is fostering a new industry with enormous economic potential. They provide a diverse set of capabilities & intelligence, concluded Mr Razack.

Speaker 2: Dr. Kuldeep Singh Rana (Engineering Officer Gr.3, Central Power Research Institute)

Compliance - Battery

Starting with an introduction to Central Power Research Institute (CPRI), Dr Rana explained the battery testing and R&D laboratory of CPRI and its engagement with other institutes like Niti Ayog, DST, BIS, BEE, QCI etc. He stated that the battery is a major factor in controlling the drones' flight time and output. The longer the flight time, the higher the

battery capacity. The battery has a high level of stability & employs a lithium-ion polymer material instead of a typical lithium-ion battery's electrolyte. He also gave some examples of different formats of Li-ion cell/batteries. He also briefed the LIB battery pack components and steps involved in the making of the battery pack. Once the battery pack is ready, the safe operating temperature and zone are important.

Dr Rana also spoke about the certification standards for drone batteries in Europe and the United States. He educated the manufacturers about the battery performance tests which are important for the lifting of the drone from the ground. He also gave suggestions for larger-size battery pack performance and safety.

Speaker 3: Mr. Udit Kaul (Dy. Manager, ICAT)

Battery Compliance Requirements

Mr Kaul gave a brief introduction to the International Centre for Automotive Technology (ICAT), which is a leading automotive testing, certification and R&D service provider under the aegis of NATRIP (National Automotive Testing and R&D Infrastructure Project).

He explained the different performance tests at ICAT (electrical, environmental, mechanical) and application-specific performances. He also focused on the safety measures required for the testing of the battery performance. Talking about the different types of tests, Mr Kaul highlighted the importance of it and detailed that drones must be powered by onboard batteries to operate. Because of their high energy density in comparison to their size & weight, lithium polymer batteries are among the most commonly utilized battery types for drones.

Mr Kaul showed the various types of test facilities. He enlightened the audience by giving the different aspects while and before conducting the mentioned tests.

The technical session was concluded with a Q&A discussion.

Documentations from the Manufacturers to Demonstrate Compliance & Manufacturer's Perspective

Moderator: Mr. C.S Sharma (Jt. Director, PADD, QCI)

Mr C.S Sharma, the moderator of the session explained in brief, the key points of the technical session III which is based on the requirements pertaining to documentation and other test requirements which are mandatory to demonstrate the scheme compliance. He also talked about employing this learning in future compliance. Mr Sharma introduced the speakers of the session and welcomed them to put forward their insights on the respective topics.

Speaker 1: Mr. K. Thulasiraman (DD (AE), DGCA)

Compliance Requirements for Type Certificate- DGCA's Perspective

Mr Thulasiraman spoke about the civil aviation safety concept. The Directorate General of Civil Aviation (DGCA) is a statutory body of the Government of India which regulates

civil aviation in India. Mr Thulasiraman explained the civil aviation safety concept objectives with respect to DGCA. He mentioned that DGCA assured the safety of Aircraft by the certification. He also clarified different Type Certificates (TC) and its process flow.

Mr K. Thulasiraman also touched on the drone area by explaining the different types of drones. Furthermore, he briefly explained the certification criteria sub-divided in JARUS CS- UAS and Certification Scheme part 3. He then concluded his session by talking about the upcoming outlook of DGCA certification with the scheme.

Speaker 2: Mr. Ashim Dutta (Deputy Wireless Adviser, Wireless Planning and Coordination (WPC) Wing, Department of Telecom (DoT))

UAS-Regulatory Compliance requirements of DoT

At the outset, Mr Dutta introduced the Wireless Planning and Coordination Wing (WPS). With the legal provisions, he explained different sections of the ITA, 1885- Principal Act to regulate the 'establishment, maintenance and working of telegraph'. Mr Dutta also highlighted the importance and exemptions of the licence. Moving forward, he stated that Equipment Type Approval (ETA) is required to upgrade the import of wireless devices in India, which can be obtained under two categories; i) Self-declaration and ii) Scrutiny based. He also mentioned that for an identifiable RF module, an ETA can be obtained, and the same module can be installed in the finished product; the manufacturer may certify it.

Mr Dutta clarified the doubts regarding both categories of obtaining ETA, self-declaration ETA and Scrutiny based ETA which will be useful for the manufacturers to apply accordingly.

Speaker 3: Mr. Anoop Upadhyaya (Director and Co-Founder, IoTechWorld Avigation Pvt. Ltd.)

Manufacturer's Perspective

Giving a brief introduction about IoTechWorld Avigation, he stated that IoTechWorld Avigation Pvt. Ltd. is a company incorporated by highly educated professionals and a set of like-minded bright technocrats and engineers who graduated from IITs, renowned engineering colleges and business schools in India. With the vision to be the most trusted, affordable and technically advanced UAV Company in the World, IoTech is working continuously in upgrading its technology.

Speaking about the current spraying technology, Mr Upadahaya shared a few challenges faced by the farmers while spraying on the farms for which the solution is the drone facility to be provided to the farmer (Agribot spray drone) which is a Hexacopter (6 Motor) type of drone with 10L of the capacity the range of 500mtr (Line of sight) and Upto 20 minutes with one set battery of flying time. The benefits of Agribot are that; Agribot UAV is completely Made In India. DGCA Norms Compliant and it has local service centers / Spares / Maintenance / Training / Updates / After Sale Support. Plus, it is time and water saving.

Talking about the documentation process, he suggested some TC approval recommendation such as referring to Drone Rule 2021 and clarifying doubts before starting the documents, following the QCI website for FAQs, preparing documents with proper revision control and stakeholders' name (Prepared, Verified and Approved by), Compliance Matrix should be filled by the Manufacturer rather than CB with proper pointers to reference document and clause detail, page number, etc. In the conclusion of his presentation, Mr Anoop Upadhaya stated that Manufacturers should focus on documentation, which ensures the traceability of all research, production, and testing activities.

Speaker 4: Mr. Sai Raj Bayela (Crystal Ball)

Manufacturer's Perspective

Mr Sai started the presentation with an introduction to Crystal Ball, which is a startup company focusing on the area of agriculture and healthcare in rural India. He discussed

some pilot projects which they are working on with the vision to become World's fastest end-to-end aerial insights delivery company solving real-life problems using Drones, AI and Analytics. Talking about the manufacturer's point of view, he mentioned the three key points for successful compliance in the quickest manner from their experience namely understanding of the compliance criteria, understanding of how to apply, and crisp, organized & traceable documentation. He further profoundly explained these three key points for a better understanding to the audience.

He thanked QCI and everyone involved for this opportunity.

Speaker 5: Mr. Smit Shah (President, Drone Federation of India (DFI))

Documentation (All logs and flight manuals) & Flight Testing

Mr Shah focused his discussion on the documentation requirements for the flight manual, product manual, and product manual. He mentioned that along with the other certification documents, the product manual or flight manual is also important as it explains the basic features of the product as well as various other standard specifications and operating criteria. He further explained the various factors for these manuals and the significance of the same.

He implied that the manuals are as important for the drones as it is for the other products because it gives a better knowledge to the customer and they don't need the help of manufacturers again and again for small issues.

Mr shah covered the significance of the flight testing as well. He explained that a drone before flying is expected to

undergo specific tests like an endurance test, speed test, rates of fuel consumption and battery discharge, operational altitude and determination of factors such as maintenance and control.

Speaker 6: Mr Guruvayurappan S. (Associate Manager, QCI)

Upcoming Technologies: BVLOS & Autonomous Systems

QCI is in the initial stages in terms of upgradation and modification of the scheme, to highlight the future aspects regarding it Mr Guruvayurappan spoke about the consideration of Beyond Visual Line of Sight (BVLOS) and Autonomous missions.

Beyond Visual Line of Sight (BVLOS) Autonomous Systems are those that can operate independently without the necessity for the operators to maintain a visual line of sight. QCI is engaging with more stakeholders to understand their needs and expectations. It is exploring the best global practices and standards in the quality ecosystem in the drone sector. He further explained the 5 levels of drone autonomy and the levels to be focused on by QCI.

Mr C.S Sharma ended the technical session by summarizing the session and appreciating the zest of the participants in regard to their queries.

Vote of Thanks by **Mr C.K Biswas (CEO, NBQP, QCI)**

Mr Biswas introduced the participants to National Board for Quality Promotion (NBQP) and its functions. He further thanked all the dignitaries from GOI bodies and PSUs, speakers, QCI experts and participants for making the event a great success. On behalf of PADD and NBQP, Mr Biswas forwarded his heartfelt gratitude to the esteemed guests' Sh Amber Dubey, and other respected speakers as well.

He further expressed his thank you to Mr Manish Pande, Mr C.S Sharma and other team members of the PADD division

for coming together in spreading awareness about the drone sector to the general audience. He also appreciated the QCI media cell for their constant help and his NBQP team for this eventful conclave.

Key Recommendations:

1. Proper organized documentation holds importance for the TC

2. More awareness webinars/training should be organized by QCI for the manufacturers

3. OEMs need to be careful while submitting the application including the design documents, Analysis reports, test procedures, test reports etc

4. There is a need for In-depth training on Drone components & functionalities as per certification scheme requirements

5. Flight testing plays an important role and should not be neglected

6. Battery performance tests are important for the lifting of the drone from the ground. Larger-size battery pack performance and safety are recommended

7. Compliance Matrix should be filled by the Manufacturer rather than CB with proper pointers to reference document

8. For a better knowledge of the end users, manuals are as important for the drones as it is for the other products

Program Data

MS Teams	10.30 AM to 1 PM	536	388	85	94.6%
Technical Tool used for Conclave	(2 hrs.30 min) Duration of Conclave	No. of Participants Registered	No. of Participants Attended	No of the Participants who have submitted the feedback	Overall Rating of the VQC

AHPI Global Conclave 2022

APPLYING INDUSTRY BEST PRACTICES IN HEALTH SECTOR: FOCUSING ON VALUE-BASED PATIENT HEALTH OUTCOMES

SESSION:

"Quality Governance and Technological Initiatives in Healthcare"

Date: 23rd April 2022

A 2-day Global conclave was organized by the Association of Health Providers India (AHPI) on 22nd & 23rd April 2022. The theme of the conclave was "Applying Industry Best Practices in Health Sector: Focusing on Value Based Patient Health Outcomes". Quality Council of India (QCI), as the knowledge partner for the AHPI, powered the session "Quality Governance and Technological Initiatives in Healthcare" on 23rd April 2022.

The session focused on the need for more effective quality governance with technological interventions in the healthcare sector. It also addressed the changing health risks and the significance of quality healthcare. QCI Secretary-General, Dr. Ravi P Singh and CEO of National Accreditation Board for Hospitals & Healthcare (NABH), Dr Atul Mohan Kochhar spoke on the occasion.

Talking about the significance of leadership for the modern-day healthcare system, Dr. Ravi P Singh pointed out different factors such as

unshackling hospital accreditation process, Integration of digital health, collective approach towards the challenges, database analysis, citizen-centric disease prevention, and awareness among people to gain trust, etc. He also emphasised the need for self-regulation amongst accredited and certified hospital ecosystem partners.

Dr. Ravi P Singh talked about the necessity for teamwork and cooperation of all the stakeholders of healthcare providers in building a quality conscious ecosystem. He explained the Hub and Spoke Model (HSM) for Hospitals/ Nursing homes/ Clinics; benefits of the model, journey of the patient from being aware of the symptoms to the treatment and lifestyle changes. He concluded his session by emphasising the collaboration of different stakeholders working towards the measures for an advanced quality in the healthcare system.

Dr. Atul Mohan Kochhar spoke about the 'Ten Commandments of Healthcare Quality', he started with the importance of effective communication for care. There should be clear communication

between a healthcare provider and a patient and among the healthcare workers as the result of poor communication can cause incorrect recommendations, poor experience for the patient, etc. Dr Kochhar indicated the role of technology in better healthcare communication. He also spoke about the process of accreditation, the benefits of accreditation and the role of the National Accreditation Board for Hospitals & Healthcare (NABH) in the whole system.

Talking about the adaption of new technologies by NABH from time to time, he explained to the participants about the certification program introduced by QCI, NABH called Healthcare Organizations Platform for Entry-Level Certification (HOPE) which is a diverse platform for

the certification process of healthcare organizations with complete information about the simplified certification process, requirements and compliances. Dr Kochhar also highlighted the advantages of the program.

Another important commandment underlined by Dr. Kochhar is the importance of the health of a healthcare worker. He explained that the health of the patient also depends on the health of the healthcare worker. Dr Kochhar emphasized the importance of training as well. He summarized his oration by introspecting all the explained commandments.

Mr Saji Mathew, COO, Baby Memorial Hospital was another esteem speaker of the session. He covered the 'Quality in Digital world' topic about smart/digital hospitals. Mr Mathew talked about the transformation in the healthcare sector from traditional modes of handling patients to the digital way. He also gave an overview of different types of digital methods used by the hospitals to make a swift experience for the patient. He also highlighted the enhancement in quality assurance and the importance of changes in healthcare education.

Another speaker, Ms Viloo Williams, C.I.O & Head- Digital Transformation, Sir H.N. Reliance Foundation Hospital, also talked about the digital methods for the healthcare sector. Concerning the patient's experience, she explained a business model for digital transformation. Ms Williams also shared a few government initiatives and discussed some statistics to highlight the areas of improvement in the healthcare sector.

Participants' queries about the topic

The conclave was attended by the notable medical fraternity, and it was received enthusiastically by the attendees. The annual awards for best practices in the healthcare sector and quality leadership were also distributed. The conclave ended with a valedictory session.

NATIONAL CONFERENCE ON TRANSFORMING INDIA WITH QUALITY & INTELLIGENT INFRASTRUCTURE

INAUGURAL SESSION:

"A National Conference on 'Transforming India with Quality & Intelligent Infrastructure' was organized by the PHD Chamber of Commerce and Industry."

Date: 10th June 2022

Quality Council of India (QCI), was the supporting partner of the conference.

Dr. Ravi P Singh, Secretary General, Quality Council of India, delivered a keynote address in the session. Highlighting the theme of the gathering, he talked about the two core focuses of the conference; one being the quality infrastructure and the other being physical infrastructure. He also explained that quality infrastructure is different from physical infrastructure and how Quality Council of India (QCI) helps in curating the quality by certification. He also congratulated the Ministry of Road and Transportation on building a quality infrastructure within

the past few years which India could only dream of.

Talking further about the role of QCI, Dr. RP Singh elucidated a few of the schemes by QCI which help in the accreditation in different fields. He talked about WDRA, Lead safe paint scheme helpful in the infrastructure area. QCI has also established an organization within QCI known as the National Institute for Chartered Program and Project Professionals (NICPP) a recommendation from NITI Ayog to look into the delays and the cost of infrastructure projects. He also spoke about the training programs by QCI and EIA consultants across the country. In concluding his statement, he sent a message to the young generation that even if they prefer to study outside of

our country, they should come back and utilise their knowledge in India.

After the presidential address by Mr Pradeep Multani, President, PHD Chamber of Commerce and Industry, General (Dr) V.K Singh, PVSM, AVSM, YSM (Retd.), Hon'ble Minister of State for Road Transport and Highways and Minister of State for Civil Aviation, GOI gave the Inaugural speech. General (Dr) V.K Singh, addressing the panel welcomed everyone present at the conference, he highlighted the importance of the theme of the conference and the importance of the better infrastructure for the smooth functioning of the economy. Each industry requires an upright infrastructure, hence the GOI has decided to spend on infrastructure.

Talking about the future of the infrastructure industry, Gen. Dr V.K Singh announced that the Government is focusing on sustainable development in regards to the future. They are planning for the next 50 years of development by utilizing the resources and cost sustainably. Another point mentioned by him was prioritizing innovation and creation. "If you don't innovate, the cost will be heavier, you may lose quality and you may lose sight of the aim that you have set" stated Gen. Dr V.K Singh. A mindset change is required where sustainable infrastructure is concerned to ensure economic growth.

He mentioned that cost overrun and delays are the biggest impediment in the sector and to dispose it off, the government has taken some significant steps in this direction. Giving credit to the dynamism of the Hon'ble PM & Mr Nitin Gadkari, the hon'ble minister also introduced the various projects of GOI on zones, ports and shortage connectivity in the different parts of the country. He also focused on the technology & construction equipment,

to bring down the cost, investment in technology is important. He also mentioned the PM Gati Shakti program which is helping in increasing the speed by making the whole process of construction hassle free. In concluding his speech, Gen. Dr V.K Singh talked about the need for intelligent infrastructure and the demand for speedy yet sustainable development.

The Inaugural session ended with concluding remarks by Mr Himanshu Agrawal, Co-Chair, PHD Infrastructure Development Ports, Shipping, Roads and Waterways Committee followed by the Vote of Thanks by Mr Saurabh Sanyal, Secretary General, PHD Chamber of Commerce and Industry.
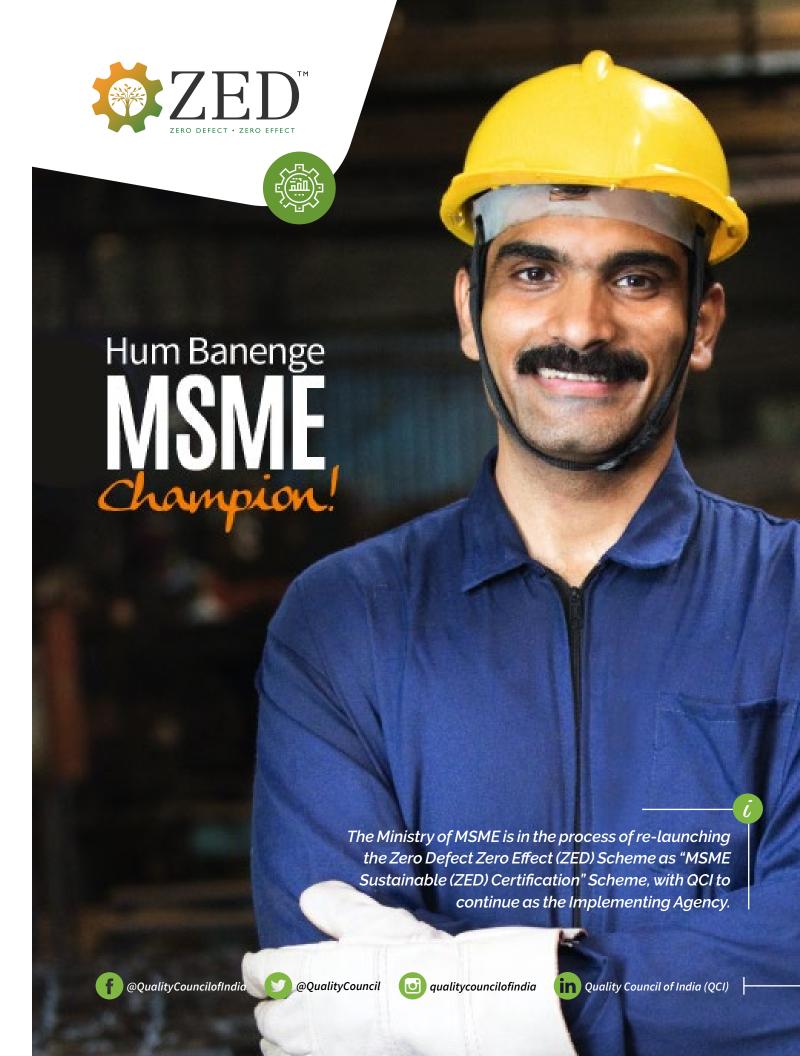
Technical Session: "Emerging Technologies For Quality and Intelligent Infrastructure (Powered by QCI)"

The session was Chair by Mr Nikhil S. Waghmare, Senior Advisor-PPID, Quality Council of India (QCI). The key points of discussions of the session were; How to reduce the requirement of key inputs such as steel and cement infrastructure projects, alternative materials for Infra construction, building climate-resilient highways (safe, smart, speedways) & concrete expressways, short season as the world for construction due to climate issues, Intelligent Infrastructure-Role of machine learning & automation, Technological innovation-tunnelling, construction wearables, exoskeletons etc., re-engineering in construction practices, use less & marginal/ waste materials in Infra projects, and construction robotics & LIDAR technology for DPR preparation innovations in building green factories and office buildings.

Mr Waghmare started the session by introducing the key points of discussion. He then explained the role of quality in Infrastructure. Quoting Dr Michael J Harry, he gave the following definition of quality "Quality is the state in which the supplier and the customer enjoy value entitlement in every aspect of the business dealings."

He continued to discuss the various factors for promoting quality infrastructure. He highlighted the issues from the customer side of the infrastructure. The suppliers need to provide a satisfactory project. Another aspect he discussed was the quality control of the product/project which ensures the credibility of its lifeline. Quality assurance is another aspect highlighted by Mr Waghmare. He explained the importance of these quality aspects. While the quality control restricts the unwanted factors to hamper the smooth production, quality assurance gives the confidence to the supplier to meet the quality standard of the product. Mr Waghmare also talked about the role of the Quality Council of India (QCI) briefly in making sure that the quality aspect of any project is not compromised. He also introduced various programs of QCI working towards its mission of the quality assured society. Mr Waghmare further introduced the speakers of the session and the contribution of each and every one of them to Infrastructure development.

The panellists of the session were Mr Pankaj Dubey, Founder & CEO, DSPIN Consulting Pvt Ltd & EV pappa, Mr Satish Pandey, Principal Scientist and Project Leader Flexible Pavement Div., CSIR-Central Road Research Institute, Mr Werner Maritz, Director, Industry Strategy Oracle Construction and Engineering. They gave their insights on the theme of the session. The session was concluded with the facilitation of the panellists.

The Ministry of MSME is in the process of re-launching the Zero Defect Zero Effect (ZED) Scheme as "MSME Sustainable (ZED) Certification" Scheme, with QCI to continue as the Implementing Agency.

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MSME Sustainable (ZED) Certification, Ministry of MSME

- MSME Sustainable (ZED) Certification scheme was launched by Union Minister for Micro, Small and Medium Enterprises, Shri Narayan Rane in the presence of State Minister, MoMSME, representatives of all States/UTs and MoMSME Officials on April 28, 2022 at Vigyan Bhawan, New Delhi

- Conducted virtual training program for MoMSME Officials, MSME-DIs and MSMEs

- ZED Showcased in "UNNATI Industrial Expo – 2022" held on May 13, 2022 at DNH&DD

- ZED Showcased in "Uttar Pradesh MSME Bharat@100" held on June 27, 2022 at Lucknow

10822
Number of ZED Registered MSMEs

(Micro: 9181, Small: 1406, Medium: 235)

144
Number of Certified MSMEs

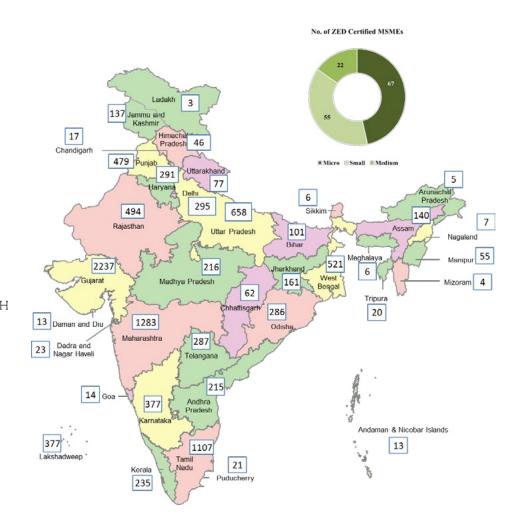Bronze -(Micro: 67, Small: 55, Medium: 22)

1483
Number of MSME KAWACH Registered MSMEs

(Micro: 1310, Small: 146, Medium: 28)

43
Number of Certificate of Assessment issued under MSME KAWACH:

Micro: 35, Small: 06, Medium: 02)

No. of ZED Certified MSMEs

WASH (Workplace Assessment for Safety & Hygiene) Scheme

- Assessments (Total Applications Received: 550+, Total Assessment Conducted: 527)

- 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: 11124 (more than 3 lakh available rooms)]

  1. Participating States/UTs: 09

  2. Number of Units Self-Certified: 98

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

ODOP Project of U.P. Government

- A workshop on **"Quality Intervention for Glassware & Metalware Clusters of Uttar Pradesh"** conducted on May 18, 2022 at Lucknow for Industrial units of Uttar Pradesh wherein the components of the compendium and its utility were explained

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

A workshop on "Quality Intervention for ODOP manufacturers of Uttar Pradesh" conducted on May 18, 2022 at Lucknow

Ministry of MSME, Shri Narayan Rane, launching the MSME Sustainable (ZED) Certification Scheme on April 28, 2022, at Vigyan Bhawan, New Delhi

Hon'ble Minister of MSME, Shri Narayan Rane, inaugurating the ZED Logo at Vigyan Bhawan, New Delhi, 2022

Training of MSME-DIs on MSME Sustainable (ZED) Certification Scheme

Training of MSMEs on Bronze Certification under MSME Sustainable (ZED) Certification Scheme

PADD

Project Analysis & Documentation (PAD) Division

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Voluntary Certification Schemes

Voluntary Certification Scheme for Traditional Community Healthcare Providers (VCS-TCHP)

- The Scheme offers a uniform and standardized assessment framework for TCHPs who manage various streams of health services (jaundice, common ailments, poisonous bites, bone setting, arthritis, and traditional birth attendants) based on their traditional knowledge, experience, and expertise

- Govt. of Tamil Nadu has taken note of the value proposition of VCS-TCHP and has funded the exploration and certification of over 100 TCHPs from Irula tribe in Nilgiris district that are under Particularly Vulnerable Tribal Groups (PVTG) category

- The Chief Minister of Tamil Nadu handed over the certificates to the certified traditional healers

- A total of 743 TCHPs certified under the Scheme till date

Govt. of Tamil Nadu endorsed value proposition of VCS-TCHP in preservation of traditional knowledge and supported the drive by an approved PrCB TDU in Nilgiris district

AYUSH Mark Scheme

- A total of 5139 products are certified under AYUSH Mark Scheme, out of which 3140 products are certified under Premium Mark and 1999 products are certified under Standard Mark till date

- PADD participated in the Global Ayush Investment & Innovation Summit held at Gandhinagar, Gujarat during 20-22 April 2022

Hon'ble Chief Minister of Tamil Nadu, Sh. M.K. Stalin, awarding certificate to TCHP belonging to PVTG

Hygiene Rating Scheme (HRS) of FSSAI

- Over 18,000 Food Service Establishments (FSEs) have been assessed under HRS

- QCI has recognized 22 HRAAs till date that are conducting HRS audits

Certification Scheme for Unmanned Aircraft Systems (CSUAS)

- Dr. Manish Pande, Director and Head, PADD, hosted Fireside chat in Drone festival 2022, organised by Ministry of Civil Aviation (MoCA) which was inaugurated by hon'ble Prime Minister, Shri Narendra Modi

- Speaker during the conference on 'Promotion of Kisan Drones: Issues, challenges and way forward', inaugurated by the Union Agriculture Minister, to sensitize participants about CSUAS

- Speaker during the International Aerospace Conference (AeroCON) 2022 at Bengaluru

- Bureau Veritas becomes third ATE/CB approved under the Scheme

- Statement of Conformity to 2 manufacturers basis which DGCA to issue Type Certificate

- 22nd VQC on 'Drone Sector: A Way to Quality', was held by PADD and NBQP. It was inaugurated by Sh. Amber Dubey, Joint Secretary, Ministry of Civil Aviation and witnessed around 400 participants

- Award of first type certificate under Drone Rules, 2021 to IoTechWorld Avigation Pvt. Ltd. and second type certificate to Model V (first type-certified mapping drone) of CrystalBall

22nd VQC on 'Drone Sector: A Way to Quality'

During the launch of NITI Aayog's Experience Studio on Drones, Mr. Adil Zainulbhai, Chairman, QCI, elucidated QCI's Certification Scheme for Unmanned Aircraft Systems (CSUAS)

Panel discussion on 'Unmanned Aircraft Systems – Current Status & Opportunities' during Aerocon 2022

In the Drone Festival of India, Dr. Manish Pande, Director & Head, PADD hosted a Fireside Chat

Award of first type certificate to IoTechWorld Avigation Pvt. Ltd. by Sh. Jyotiraditya Scindia, Minister of Civil Aviation

Award of Type Certificate under Drone Rules, 2021 to Model V (first type-certified mapping drone) of Hyderabad-based CrystalBall

Dr. Manish Pande, Director & Head, PADD, QCI, shared the requirements of Certification Scheme on UAS as a speaker during the conference on Kisan Drones

PROJECTS

Benchmarking IndG.A.P. to GLOBALG.A.P.

- 4 IndG.A.P. certificates issued under the Benchmarking initiative

- GLOBALG.A.P. initiated independent technical review for benchmarking IndG.A.P

VCS-MPP | CB&S Project

- Total 63 trainings conducted pan-India in which 3858 attendees have participated till date

- Package of practices for 64 species approved

- Demonstration plots in 7 locations established, out of which 2 demo plots have been certified

VCS-MPP GAP training in Bhimashankar, Maharashtra

VCS-MPP GAP training in Mettupalayam, Tamil Nadu

VCS-MPP GAP training in Muzaffarpur, Bihar

VCS-MPP GAP training in Shahapur,Yadgir, Karnataka

VCS-MPP GFCP training in Thakurmunda, Odisha

NGCMA GLP Cell

- Assisted a total of 15 GLP inspections in the reporting period

- A TC meeting and a sensitisation seminar conducted during the period

International – UNFSS initiative

- QCI participated as the Secretariat of the India National Platform on Private Sustainability Standards (India PSS Platform) as the first national platform on PSS

- PADD's presentation on VCS-TCHP scheme focused on local health traditions

Participation of PADD in National Platform and Initiative Cooperative (NPIC) as the Secretariat of the India PSS Platform

- Dr. Manish Pande, Director & Head, PADD, was nominated by the members of the National Platform and Initiative Cooperation Network (NPIC Network) to chair the network from 2020 – 2022

PPID
Project Planning & Implementation Division

The division has mandate to explore Research and Capacity Building activities in the frontier areas relevant to the organizational mission.

Project Planning and Implementation Division (PPID)

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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. Initially, QCI started with facilitating independent

sampling services to a part of the Power and Non- Power consumers. QCI has executed around 2800+ tri-partite agreements among the coal companies and coal consumers for availing the TPS facilities. QCI has commenced operations at 300+ loading points across the CIL's subsidiaries. QCI has sampled around 310+ Million Metric Tonnes (MMT) of coal, since the inception.

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

- SWSM, HP entrusted QCI to conduct the third-party inspection of the schemes executed under GoI flagship scheme Jal Jeevan Mission

- The objective is to carry out inspection of all engineering works as per Annexure VIII of "Operational guidelines for

implementation of JJM" relating to civil, mechanical and electrical components executed under in-village and other than in-village infrastructure (intake structures, treatment plants, intra and inter district distribution network, balancing/ intermediate reservoirs, pumping and electrical systems etc.,)

- MoU has been signed between QCI and SWSM, HP on 11th Nov 2021 at JJM Mission Director's office in Shimla. QCI is conducting inspections for all engineering works (Civil, Electrical & Mechanical), labour, safety and payments related specifics for the 113 presently allotted schemes from the district of Una, Kangra (Nurpur) and Bilaspur. From 18th Dec 2021, QCI has been initiated TPI in Una, Nurpur and Bilaspur circles

Third-Party Assessment of Buses, Bus Stations and Workshops & Depots in the state of Uttar Pradesh

- QCI proposed to conduct an Independent Third-Party Assessment of Bus Depots,

Workshops, Stations and Buses. The assessment will consist of analyzing the quality of physical infrastructure and mobile infrastructure, maintenance of infrastructure, quality of services provided, human resources, and safety measures

- As per the discussion with the client, QCI will conduct this assessment of 5 Bus stations, 2 Depos & Workshop each, 20 buses on Pro-Bono basis and submit the finding of the report to the department. Unique frameworks are designed for bus, bus station and depots & workshops with well-defined parameters. Framework has been tested at "Alambagh Bus Station" to fine-tune it. Way Forward: Findings from this testing will be included in the final framework and post finalization of framework, a two-fold assessment approach will be followed for the inspection. Based on the findings of the final study, a suitable decision will be taken by the department for further allotment of work

Third-Party Inspection of Water Supply Schemes Under GoI Flagship "Jal Jeevan Mission (JJM)" in the state of Haryana (PHED, HR)

- QCI has been entrusted to conduct inspection of all engineering works (Civil, Electrical & Mechanical), safety and labour payments related specifics as per the JJM guidelines annexure VIII. Currently, QCI is conducting the assessment of 129 allotted schemes from 7 Districts, Sonipat, Jind, Sirsa, Rewadi, Dabwali, Fatehabad, Siwani, of Haryana

- The aim is to provide recommendations post the Third-Party Inspection (TPI) in an efficient manner, so that best quality is ensured for the water supply schemes, and access to safe and clean water is achieved

SVANidhi se Samriddhi

The PM SVANidhi Scheme was extended by Ministry of Housing and Urban Affairs (MoHUA) to 'SVANidhi se Samriddhi' for empowering street vendors with holistic development and economic upliftment. Under this project, beneficiaries and their families were profiled and linked, as per their respective eligibilities, to the existing welfare schemes of the Government of India, designed as safety nets to protect the street vendors from the socio-economic risks and insecurities of life and livelihoods. Objective of the project is to assist in preparing the socio-economic profile of street vendors covered under their PM SVANidhi Scheme in the selected 125 cities for which QCI has developed a

web portal and mobile application to capture and reflect the data. Till date, 8.5 lakh street vendors and 17 lakhs of their family members have been profiled. 21 lakh scheme linkages have been completed to these beneficiaries. Proposal for extension of SVANidhi se Samriddhi to 4500 ULBs was accepted by MoHUA in Aug'21, under which first batch of 126 ULBs are being added and the program was rolled out on 10th April 2022

Data Collection and Assessment of 266 cities on Urban Outcomes Framework 2022

The Ministry of Housing and Urban Affairs (MoHUA) has launched the third version of the four indices, namely the Ease of Living Index (EoLI), Municipal Performance Index (MPI), Climate Smart Cities Assessment Framework (CSCAF), and Data Maturity Assessment Framework (DMAF) along with Expert

Suggestions data points which are part of Urban gaged Outcomes Framework (UOF) 2022. They have engaged QCI to conduct data assessment for EoLI and MPI and collect data for the remaining frameworks in around 266 Indian cities. The prime objective of the project is to assess the selected cities across diversified sectors and shift the focus from formulation of mere indices to institutionalization of data collection process from/by cities which will then be accessible in the public domain.

Swachh NDMC PMU 2020-2023

QCI Project Management Unit (PMU) assists in capacity building and handholding NDMC stakeholders to streamline processes of ULB to achieve goals of Swachh Bharat Mission Urban 2.0.

The team has worked with utmost dedication and focus, to complete all activities regarding Swachh Survekshan 2021, Garbage Free City Ranking 2020, Water Plus and Safaimitra Suraksha Challenge 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.

RACB

The division has mandate to explore research and capacity building activities in the frontier areas in order to meet the goal of organization in the quality improvement initiatives covering each domain of human life.

Research Analysis and Capacity Building (RACB) Division

- RACB has mandate to explore research and capacity building activities in the frontier areas relevant to the mission of the organization. The aim of the division is attributed in promoting quality in assessment and impact analysis of academic, R&D, international research programs as well as technical education quality improvement program inside the country. The division has meticulously developed evaluation methodology for assessing independent research project sanctioned under R&D programs which are supported by government bodies.

RACB has been working on a number of evaluation projects such as:

Indo-U.S. Science & Technology Forum (IUSSTF)

- The IUSSTF is a bilateral, autonomous organization, was established by the Government of India and the United States of America in 2000. IUSSTF's mission is to "act as a catalyst to promote long-term scientific collaborations between India and the U.S. through partnerships amongst individual scientists, scientific institutions and the scientific community at large."

- This prestigious project is awarded to the division by IUSSTF, an autonomous agency of DST, Ministry of Science and Technology, Government of India. The main aim of the proposal is to carry out the impact analysis of IUSSTF's programmatic portfolios. The analysis will include evaluation of research projects/ fellowships/collaborative R&D tie ups/scientific exchange programs/ innovations under Virtual Networked Centres & Bilateral Workshops being taken up by the forum followed by an outcome-based assessment framework developed by the division in order to obtain the desired outcomes.

- The division is interacting with stakeholders under the forum (Indian & US's PIs) to gauge the impact of the program. Below are the few glimpses from the interaction:

Access to Knowledge for Technology Development & Dissemination (A2K+) Studies (Ministry of Science and Technology Government of India)

Objective and aim of this proposed A2K+ Studies is attributed to prepare a study report on development of new building materials by using agro-industrial waste such as PVC waste, Municipal waste, Construction & Demolition waste, Hospital waste, e-waste etc., along with development of cost effective technology/ instrumentation in waste management systems such as sensor-based bins, sensor-based automatic waste collection system through garbage chutes in residential buildings, providing useful information and knowledge-base to technology/ manufacturing driven organizations, useful data and knowledge base to industry, industry associations, academic & research institutions, research laboratories, In-house R&D laboratories, Start-ups, incubation centers, consultants, entrepreneurs, as well as study and analyses the developments in the emerging areas of indigenous technologies, and document those findings, outcomes and learning experiences for wider dissemination, prepare and submit detailed status reports.

We are also focusing to support DSIR in strengthening an ecosystem to enhance the speed of technology acquisition and adaptation towards large benefits of the end users.

TCB Training and Capacity Building

E-LEARNING

QUEST™
Quality. Employability. Skill. Training.

Training and Capacity Building (TCB) cell is pleased to announce the launch of its newly developed website **(https://tcb.qcin.org/)** *with an aim to reach out to people around the globe faster and with ease.*

What's new on eQuest?

In this quarter, TCB launched two market-driven eLearning courses in the domain of Laboratory and Healthcare

- ISO 17034:2016 'General Requirements for the Competence of Reference Material Producers (RMP)' in the domain of laboratories. This program aims to develop a good understanding and interpretation of ISO 17034:2016 from Reference Material Producer's angle like how to plan for RM production, steps to follow, requirements for preparing the reference materials and getting accreditation.

- Programme on Implementation (PoI) NABH 5th Edition Standards for Hospitals in the domain of healthcare. The objective of this programme is to provide guidance to healthcare provider on implementation of NABH standards and to develop Internal Counsellors within the hospitals for helping them to work towards implementation of quality and patient safety standards, achieving accreditation and maintaining the same.

25 short-term courses developed on the occasion of 25th anniversary of QCI, covering variety of domains. Can be availed on eQuest. All of them are live and available at a nominal cost.

Exclusive trainings administered by TCB

- 5-day training supported by Physikalisch-Technische Bundesanstalt (PTB) Germany on 'Laboratory Management System' for the officials of Government of Nepal, conducted by TCB from 13-17 June 2022 and witnessed a successful conclusion. The training was aimed at increasing awareness and strengthening the knowledge amongst the participants who are new to accreditation and ISO/IEC 17025:2017

- An on-site training and orientation program was administered for the Directorate of Export Promotion & Marketing, MSME Department, Government of Odisha, Bhubaneswar with an objective of transforming their various Centres into 'Centres of Excellence'

From the Dashboard of the Cell

- TCB/ eQuest has awarded 896 certificates to the competent learners. About 528 learners benefitted from Instructor-Led Training conducted both online and on-site

- TCB successfully concluded a 3-day Instructor-Led virtual training on Lean Six Sigma Green Belt Certification commencing

Exchanging dialogues on National/ International platforms

- TCB head Completed the Asia Pacific Accreditation Cooperation Incorporated (APAC) evaluation of Singapore Accreditation

from 25th May 2022. This marks the 5th successful training of the same. The course is based on the American Society for Quality's (ASQ) Body of Knowledge (BoK) and is offered in online mode imparting thorough understanding of various topics of BOK by an industry expert and a certified Six Sigma professional. 'Lean Six Sigma Green Belt Training and Certification' is awarded to people who successfully complete and pass the examination. TCB has announced its 6th batch on Lean Six Sigma Green Belt and introducing 1st batch on Six Sigma Yellow Belt in the coming quarter

- In e-Learning, a total of 696 learners have registered with eQuest wherein 526 have registered in paid courses. 368 learners completed their course and were awarded certificates
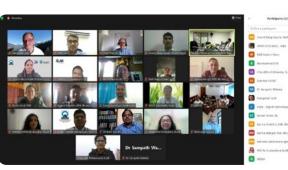

Council (SAC) Singapore for its calibration accreditation program by witnessing the assessment of a CAB

- Session on 'Quality Infrastructure' as a Guest faculty by TCB Head was delivered for MBA, 1st year students of GLA University at Mathura. He shared his knowledge and insights on importance of Quality Infrastructure, three pillar - metrology, standardization, accreditation, and conformity assessment. He spoke on how QI is a critical element in promoting and sustaining

economic development as well as environmental and social well-being. He also enlightened the students with the importance and relevance of organizations like BIPM, ISO, ILAC, IAF etc.

- A session on Quality and Accreditation during the 5th National Conference for Biomedical Engineers held at KIMSHealth, Thiruvananthapuram. The event emphasized on "Accreditations & Quality Assurance significant for Biomedical Engineers" and which provides the finest platform for interacting and learning from NABH & NABL Assessors, Experts in the field of Quality & Accreditations

- TCB presented the training & capacity building program completed for the SARC members with the support of PTB Germany and possible interventions in future during 8th SAARC Expert Group on Accreditation (SEGA) meeting held virtually

In-house Articles

Dr. Harveen Kaur Assistant Advisor, QCI

WHAT MAKES NORDIC COUNTRIES GLOBAL LEADERS IN SUSTAINABILITY?

Why Sustainability Is a Buzz Word Today?

Sustainability has risen to prominence as one of the defining characteristics of twenty-first-century reality within a few decades. This new paradigm of sustainability is expected to have a profound impact on how we manage and design systems in the twenty-first century, affecting all aspects of our economy. The Brundtland Report of 1987, states that sustainability is the development that meets the needs of the present generations without compromising the ability of future generations to meet their own needs. The three pillars of sustainability are economic viability, environmental protection, and social feasibility.

Our societies' growing uncertainty about environmental issues has given rise to divergent viewpoints that can be reconciled by embracing sustainability. Challenges such as pollution, climate change, loss of biodiversity resource depletion, and increase in waste are some of the reasons of unsustainable practices in developing countries and this has lead to an emergent need to act differently and embrace sustainability.

Nordic countries of Northern Europe (Sweden, Denmark, Norway and Finland) are among the most developed economies in the world. The shared economy of these countries has crossed $ 1.6 trillion, while the population is only 27 million. These countries are not only on the front of per capita income but also on the top of the index of happiness. Energy self-reliance is an important factor behind this mantra of inclusive development.

Sustainability Partnerships of India and the Nordic Countries

The Russo-Ukraine war has added to the energy crisis facing a world already going through an energy transition. The global goal of zero carbon emissions is at stake because of the war. At such times, India's green energy partnerships with the Nordic countries show the way for the future. Demographically and geographically,

World's Progress on the Sustainable Development Goals

Index Rank	Country	Overall Index Score (0-100)
1	Sweden	84,5
2	Denmark	83,9
3	Norway	82,3
4	Finland	81,0
5	Switzerland	80,9
6	Germany	80,5
7	Austria	79,1
8	Netherlands	78,9
9	Iceland	78,4
10	United Kingdom	78,1
11	France	77,9
12	Belgium	77,4
13	Canada	76,8
14	Ireland	76,7
15	Czech Republic	76,7
16	Luxembourg	76,7
17	Slovenia	76,6

Source: Sachs, J., Schmidt-Traub, G., Kroll, C., Durand-Delacre, D. and Teksoz, K. (2016)

the comparison of Nordic countries with India may not be fair. But to realize the dream of energy self-reliance, we have to have a long-term partnership with these small countries.

India and Denmark

India's initiative of Green Strategic Partnership (2020) with Denmark, a leader in green energy will take it to new heights. This has now been converted into a five-year action plan. Denmark is committed to reduction of greenhouse gas emissions to 70% by 2030. After taking the lead in wind power projects, it is also working on the world's cutting-edge bioenergy generation technology. Here, instead of fossil fuels, biomass such as wood chips and sawdust are being used in power plants. Wood pallets have replaced oil, gas, charcoal and firewood in power plants and thermal furnaces. Further Denmark, which was hit by an oil crisis in the 70s, today meets 50% of its electricity consumption with solar and wind power. If such technology and expertise can be exchanged between the two countries, then the ratio of agricultural residue to energy production in India will increase.

India and Sweden

Today the world is looking at Lithium Ion batteries as the fuel cells of the future. In such a situation, Sweden is making lithium-ion batteries from 100% recycled raw materials. It uses 100% recycled nickel, manganese and cobalt. With the growing demand for electric vehicles in India, recycling of lithium-ion batteries will require expertise and technology.

In India Waste to Energy programs are still at the nascent stage. The major reason for this is the inefficiency of the technology and processes cost. We should take advantage of Sweden's

expertise in this area. One such example is of the Stationary Pneumatic Refuge Collection System for Waste to Energy developed by Sweden. It doesn't collect the waste by trucks or vehicles. Here the domestic waste is carried from the production site to the disposal centre by air pressure via an underground pipeline and directly purified as energy or raw material. This waste management arrangement reduces fuel consumption to zero.

India and Finland

Finland has given legal validity to climate justice through the Climate Act, 2015 by promoting renewable energy generation. Under this, it is mandatory to reduce the carbon footprint from domestic consumption to the industry. Its greatest success can also be seen in sea transport sector. With this sector being fully automated, the share of fossil fuels remains negligible. In marine ships, an alternative to fossil fuels has been discovered by generating wind power from rotor cells.

It is no secret that global warming and increasing demand for fossil fuels complement each other. Obviously, for this we would have to reduce the temperature of the earth while meeting the energy needs. India - Finland Virtual Summit held (2021) announced Sustainability Partnership between India and Finland on areas like renewable and clean energy, circular economy, and sustainable mobility and noted that green growth is an essential element of bilateral cooperation. Further, the concerned companies, ministries and agencies are being encouraged to explore commercial activities, and R&D cooperation in the field of gas-based economy, biofuels, renewable energy, waste-to-energy, electricity storage and emerging fuels such as hydrogen under Sustainability Partnership of both countries.
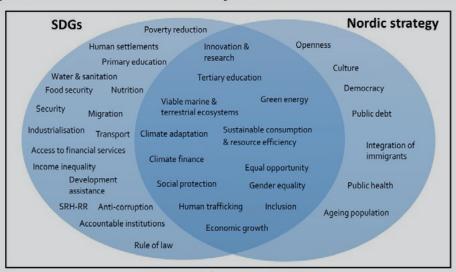
India and Norway

Norway's energy transition is well advanced. It is a world leader in electric vehicle adoption, and is advancing the decarbonisation of all transport sectors. In 2021, two-thirds of new passenger vehicles sold in Norway were totally electric, and in early 2022, electric vehicles accounted for 86% of sales. Norway may soon have all-electric domestic flights.

With increasing urbanization today, it has increased the need for energy efficiency in homes. Norway has become the first country in the world to ban the use of fossil fuels for heating homes since 2000. Energy efficiency of Norway's buildings is excellent in international comparisons, with high energy standards for new homes. In 2020, it became the first country that formally prohibited the use of fossil oil for heating in existing buildings and in new buildings altogether.

Learning from Norway India would also have to encourage innovation and investment on the domestic front for sustainable growth coupled with the energy crisis. Managing the resources in the oceans in a sustainable manner is a matter of mutual interest and concern for both countries. Recently India and Norway has strengthened partnership on Blue Economy (2022) for Integrated Ocean Management & Research. The fact that Norway and India are launching a new initiative indicates that the two countries' relationship is strengthening. Several projects to fight marine litter are already being conducted as part of the joint activities.

Comparison of the issues addressed by the SDGs vis-à-vis the Nordic strategy

Source: Stockholm Environment Institute

Conclusion

Nordic Countries are leaders in Sustainability because of the following reasons:

Long-standing commitments: The Nordic countries have a long history of advancing the goals of sustainable development on a national and international scale, including the establishment of the United Nations Environment Programme (UNEP).

Youth at the forefront: The Nordic countries promote youth participation as future consumers and promoters of sustainability.

Label it: The Nordic Swan Ecolabel is the official independent and third-party certified ecolabel of the Nordic countries.

Raised awareness: The Nordic countries aspire to be a driving force for a sustainable society and responsible lifestyle, particularly when it comes to health and environmental concerns.

Transition to cleaner energy: When it comes to emissions reductions, the Nordic Region is on top. Renewable energy accounts for 40% of the Nordics' total domestic energy consumption.

Recognizing environmental stewardship: The Nordic Council Environment Prize – a 47,000€ award – was established in 1995 to recognise companies, organisations, or individuals for exemplary efforts in integrating environmental respect into their business or work, or for extraordinary initiatives on behalf of the environment.

Green Smart Cities: Cities also have easy access to nature and green open spaces within built-up urban environments. These green spaces are seen as critical to promoting biodiversity and improving the health, living conditions, and quality of life for Nordic citizens living in cities.

Changing the face of transportation: The Nordic countries have the largest market share of electric vehicles. They use environmentally friendly fuels in their transportation.

Solutions for Promoting Sustainable Development

- **Green technology** should be easily transferable from developed countries

- **Technology transfer** should get statutory recognition from international treaties

- The possibility of a **domestic carbon tax** should be considered

- **Development of standards** to assess the success of green programmes

- **Green diplomacy** is a necessity of the hour. It is preventive diplomacy that attempts to build resilience and align the interests of the state with the interests of every human being in terms of the conservation and sustainability

Meenakshi | Coordinator, QCI

EDUCATION

Education is the artistic heritage from one generation to the coming. There are different meanings of education similar to social, liberal, empathy, or vocational. Education is also about creativity and thinking about presented information. Education systems are divided into different stages such as kindergarten, primary school, middle school, High school, and universities. At every stage of education, students learn many things which play a very important role in growth and development. It is a belief that education is a purposeful activity directed at achieving certain aims. It is said to be a primary process that occurs during events like schooling, teaching, and learning.

Education is concerned with the transformation of knowledge and understanding, this transmission is worthwhile and done in a morally appropriate manner in tune with the student's interests. There is an affirmation about the education of holding an improvement of the learner

which is a requirement of education. Now it is understood to be a process of buying achievement or product

> Education is a disciplinary field that draws attention for both within and outside the philosophy of education like ethics, political philosophy, psychology, and sociology

brought by this process. This is the reason there is a disagreement about education, whether it is the process of knowledge or just the concept of evaluation and judgment of a person to fit in the society.

Education began in prehistory when people used to be trained in the knowledge and skills which was necessary for their society. In the earliest society of history, elders used to teach their younger orally, through imitation, Storytelling, and passed knowledge, values, and skills from one generation to the next. Confucius was the most influential ancient philosopher, whose educational outlook influence the societies regarding education in values and ethics. Confucius gathered disciples and searched for the ideology for education and learning which further continued to influence education in East Asia into the modern era.

Now in the modern era, Technology plays an increasingly significant role in improving access to education for people living in different areas and developing countries. However, the lack of technological advancement is still causing barriers to quality and access to education in developing countries. Education plays a major role in understanding human psychology which includes ethics, culture, values, tradition, behavior, history, and science. The learning process both depends on cognitive and behavioral perspectives which helps researchers to understand individual differences in intelligence, cognitive development, affect, motivation, self-regulation, and self-concept, as well as their role in learning.

Education is an important process in the personal development of humans. This can include activities such as learning new skills, creating a personal development plan, developing talents, creating ideas, developing spirituality, or improving self-knowledge. Even the action of teaching in the education system is helpful for others in improving a person.

Now the education system and transformation of knowledge have become obsolete and inaccurate. The emphasis on learning has become a shifting of teaching the skills of learning and picking up new knowledge quickly and in an agile way as possible to fit in the society and set a standard. It investigates the nature of education as well as its aims and problems. It includes the examination of educational assumptions, theories, and purpose present in them and the arguments for and against them.

Education is a disciplinary field that draws attention for inspiration from various disciplines both within and outside the philosophy of education like ethics, political philosophy, psychology, and sociology. These disciplines are also reflected in the significant and wide range in influencing education in various ways. Now there is another problem that arises in education these days which demands that all students should be treated equally in public education. This is also influential in the sense that education should open the same opportunities to everyone. But this idea is threatened by various sources of inequality which involves active discrimination and unequal distribution of wealth. Regarding educational research, some educationalists purposes experimental studies.

There is another problem that arises in the contents of the curriculum which involves the question of what should be taught to students. This also involves the selection of subjects to be taught and the consideration of arguments for and against the inclusion of a particular subject. This issue also raises the question of the aims of education.
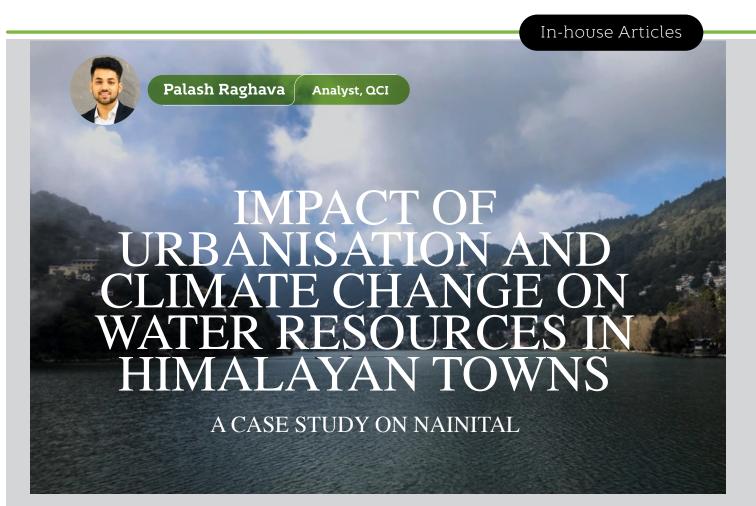
This question of the curriculum is controversial, but this controversy goes beyond the academic discourse to a wide public discourse, like questions about sexual and religious education as per social aspects. There are disagreements about which aspects should be taught and in which detail as well as to which age groups these teachings should be directed. At the same time, there are debates about religious education that involve questions like whether religion should be taught as a distinct subject or not or whether it should be compulsory.

Another objective of the topic in this field concerns the subject of moral education. This involves ethical education but problem arise in this field concerning moral beliefs and values that should be taught to the students. That's why there are many disagreements in the field of moral education. But this emphasizes the importance of moral reasoning and enabling children to become autonomous and can tell right from wrong.

Education is also concerned with how learners are to be conceptualized. "John Locke sees the mind as a blank slate or a tabula rasa that passively absorbs information and is filled with contents through experience." This theory emphasizes practice and sees students not as passive absorbers but as active learners that should be encouraged to discover and learn things by themselves. Somewhat this concept puts undue pressure on the students about learning. Education also involves testing which also plays a major and critical role, such as providing feedback on the learning progress both to the student, their parents, and their teachers. This also includes questions about the form of Standardized testing. The tests present the same questions and scoring system to all students taking the test and are often motivated by a desire for objective and fair evaluations for both students and schools. Education also involves contemplative knowledge about higher education that integrates introspection and experiential learning into the academic study to support academic and social engagement, develop self-understanding as well as analytical and critical ability and capability, and cultivate skills for engaging constructively with others.

The inclusion of contemplative and introspective practices in the education system is helpful continuously in recognizing the imbalance in higher education about lack of support for helping students about learning, grow, and understand who they are and what is the purpose of their lives and what kind of human being would they become in their future.

Palash Raghava | Analyst, QCI

IMPACT OF URBANISATION AND CLIMATE CHANGE ON WATER RESOURCES IN HIMALAYAN TOWNS

A CASE STUDY ON NAINITAL

Rapid urbanisation has been one of the major driving factors for global climate change in recent years. The basic definition of urbanisation is the increase in the number of people living in towns and cities, mainly migrated from rural areas to urban areas, which has resulted in growth in the urban population size as well as an increment in the urban area. As per a recent estimate, 55% of the world's population (4.2 billion) lives in urban areas, and this figure is expected to increase to 68% by 2050 (UN DESA, 2018). India, China, and Nigeria will account for 35% of the expected growth of the world's population between 2018 and 2050. India will add 416 million urban dwellers by 2050, whereas China will add 255 million and Nigeria will account for 189 million by 2050. In India, urbanisation is one of the important drivers of economic development. Economic growth holds a direct relationship with urbanization, as the rate of the economy is affected by urbanization. The north-west, the Gangetic plains, and southern India are important geographical units in the country that have seen urban population growth in the past.

Urbanisation in Himalayan Region

In the hilly regions of the Himalaya, urbanisation has been largely unsystematic and unplanned, and the rapid increase in tourism has been a major driver in the hills. Urbanization has two key aspects: on one hand, the rapid increase in urban areas in high mountains is creating opportunities for employment, socio-economic services, and infrastructure development. However, on the other hand, it has disturbed critical ecosystem services like water security. Unplanned urbanisation has disturbed the watershed in the Himalayan region and reduced the recharge possibilities of aquifers. It has resulted in water unavailability for drinking, household purposes, and risks of natural calamities in urban as well as peri-urban settlements. In recent years, the least accessible areas in the Himalayas are being converted into the urbanised sector due to the road network, tourism, and economic globalization. In the hill towns, the influx of migrants, tourists, and population has created a stress on the supply of clean, adequate water, sanitation, and solid waste management.

Many mountain ranges have seen urban growth as a result of physical and socio-economic drivers, e.g., many hill cities have developed by the encroachment of nearby hills, for example, Nainital in Uttarakhand, which witnessed expansion on its hillside in the 1970s.

Case Study of Nainital

Nainital is a hill town widely famous for its tourist attractions such as Naini Lake, Bhimtal, Snow View Point, Tiffin Top, Naina Peak, to name a few. It is covered with Sal, Pine, Oaks, Kaphal, and Deodar, Surai, etc. at a higher elevation. The town has a wide variety of wildlife around it. The dense forests are the natural home of barking deer, black bears, leopards, and birds such as Himalayan Whistling Thrush, Red-Billed Blue Magpie, and more can be spotted. During the 1970s, urbanisation was increased by the encroachment on its steep slopes, with population density increasing from 2111 to 4177 persons/km2, with a geographical area of 11.73 km2. Nainital witnesses a floating population of 1,50,000 during the peak tourist season in the summers. In the past 4 decades, the town has been under the phase of rapid urbanisation and different types of anthropogenic activities such as road construction, hotels, parking, and recreational sites have made the town landslide prone, increasing its susceptibility to rock falls and creeping. Naini lake, apart from being a tourist attraction, is the main source of drinking water for the town. Other sources comprise of various springs such as Pardadhara, Sipahi Dhara, etc.

Due to changes in demographics, rapid growth in population as well as tourists, climate change, urbanisation, and lack of urban planning for the future, there has been immense pressure on Naini Lake for drinking water supply over the years. The lake's overdependence, combined with other factors such as overpopulation, the drying up of Sukhatal Lake, the lake's source, encroachment including a massive increase in built-up areas around the lake, water quality issues such as eutrophication, and effluent discharge due to leakages, has called into question the lake's survival.

Unplanned urbanisation of Nainital Town around Naini Lake

> Urbanization in Himalayan Region has been largely unsystematic and unplanned, and the rapid increase in tourism has been a major driver in the hills

Conclusion

The recent studies conducted on Nainital town using GIS technique reflects the increase in built-up area as well as a decrease in vegetation due to forests have been cut down for building or incidents of forest fires have been reported in the year 2016 in the town as well as in-state.

In the current scenario, a rainwater harvesting structure is necessary to meet up the water shortages in hilly regions. Experts have always vouched for nature based solutions to the problem which Himalayan town such as Nainital is facing. According to them, there is a need to strengthen the natural recharge capacity of the lake as well as the recharge sources such as natural spring waters, arrest in rapid expansion of built-up areas.

The water insecurity in the Himalayan regions has made the introduction of Rain Water Harvesting (RWH) structures prominent in the Himalayan states. RWH structures can be installed at hotels, commercial buildings making them self-reliant in the hill town of Nainital, it will help in maintaining the lake level as stored water can be used for general purposes. The RWH potential estimated for different scale predicts the surface runoff can be captured and stored for the future use. Also, hoteliers should install rainwater harvesting structure to store the rainwater to reuse it in toilets, washing and gardening purposes which can further lessen down the stress on lake for supply during the peak season of tourists. The Rainwater Harvesting Structures can make the hill town sustainable in terms of water conservation and can help the authorities to maintain the lake level throughout the year.

Somya Jain | Analyst, QCI

BLOCKCHAIN IS THE BUZZWORD OF THIS DECADE-- CLICHE BUT TRUE!

Gartner, the research and advisory firm, anticipates that business value added by blockchain will be over $176 billion by 2025 and will soar to $3.1 trillion by 2030. Likewise, as per the draft paper of 'Blockchain: The India Strategy' by NITI Aayog, blockchain is projected to generate a business value of over $3 trillion per year by 2030. Bitcoin, a decentralized cryptocurrency based on blockchain technology, has grown from its inception (2009) to a global currency valued at over $29k per coin (June 2022). Blockchain is an indispensable technology for the global economy.

However, what is not evident is the fact that applications of Blockchain technology go light years beyond cryptocurrencies and NFTs. One would find them in the least expected domains. A blockchain marriage is an apt example. In 2018, Sierra Leone conducted blockchain-based elections, the first of its kind, where 70% of the votes were polled on the Agora blockchain which offered not only instant access to the election results but also public access for any party to review, count, and validate the

votes. Another application is in the food industry. Major food companies like Walmart, Nestle, etc. have already implanted Blockchain technology to enhance food chain transparency and traceability, thus reducing instances of food adulteration and maintaining food quality. In the UK, Food Standards Agency uses this technology to track meat distribution to improve food traceability and avoid associated malpractices.

Although blockchain technology is at its nascent stage in India, it is gathering steam in several areas including the public sector. According to a paper on National Blockchain Strategy by MEITY, immutability in Blockchain can assure citizens that their records are never tampered. Therefore, this technology seems quite promising in the fields of Property Record Management, Electronic Health Record Management, Farm Insurance, and Identity management. Embracing this thought to its core, Gadchiroli in Maharashtra has become the first Indian district to issue caste certificates to its residents through LegitDoc on the Polygon PoS chain. According to the district administration, despite having hard copies of caste certificates, it becomes challenging to verify these documents.

This initiative will not only curb the risk of forgeries but also identify the right beneficiaries for the delivery of government schemes.

In addition to its applications of National Interest, blockchain technology can add immense value to e-Governance, by speeding up government procedures, protecting sensitive data, and reducing costs. Smooth data exchange across departments will provide efficient service delivery and a decentralized tracking mechanism via smart contracts can make systems more accountable and transparent. Official documents can be verified by comparing the document copy against a version stored in a Blockchain, thus avoiding forgery.

By now, owing to repetitions, one might have guessed that the major USP of blockchain is transparency, immutability, and a decentralized network. But how does it work?

A Blockchain is a database, structured in the form of an immutable chain of blocks, each carrying whatever information it is designed to store. For instance, Bitcoin, a cryptocurrency, stores information on transactions done on this blockchain. Ledger means

a record of transactions. Blockchain is based on Distributed Ledger Technology, i.e., records of all the transactions made on the blockchain can be viewed and verified by anyone. Another important feature is a peer-to-peer decentralized network, which means all participating computers are linked together with equal permissions and responsibilities for processing data.

Let's discuss the process in detail. Suppose, Amar, Akbar, and Anthony are three friends who maintain a public ledger for all the transactions they carry out among themselves. By public ledger we mean, all three participants will have their personal copies of the ledger and any changes made to the state of a personal ledger will be visible to all the parties in their personal ledgers on a real-time basis. When a participant initiates a transaction, the remaining participants will verify the capacity of the initiator to carry out that transaction and the validity of the statement.

Let's say Akbar initiates a transaction: Akbar pays Amar $10. As a sender, Akbar will sign this transaction with his secret key (sk), which will generate a digital signature using modern cryptography. A digital signature is a 256 bits long string of 0's and 1's, which varies with every message. Using a one-way function, every secret key generates a distinct Public Key (pk) but vice versa is not possible. Akbar will share his public key with his friends. By using this key, the authenticity of the digital signature attached to the message will be checked by Amar and Anthony. If they verify the transaction, Amar and Anthony will add it to their personal ledgers.

In this example, Amar, Akbar, and Anthony can be considered miners. In the

world of blockchain, miners are the individuals who validate and process transactions. The public ledger can be understood as a distributed ledger working on a peer-to-peer network, where every transaction is broadcasted to all its participating computers on a real-time basis. In a real scenario, multiple transactions are added to a block by each miner. Once a block reaches a defined number of verified transactions, it can be added to the blockchain after reaching consensus.

The consensus algorithm may vary depending upon the protocol of the blockchain. Popular blockchains like Bitcoin and Ethereum use Proof of work. Bitcoin, for instance, uses a cryptographic hash function called SHA256. When a file or message is entered as an input, this function results in a string of 256 bits. It's infeasible to compute this function in the reverse direction. Suppose, when a list of transactions along with a special number is added as an input to the SHA256 function, it results in an output of 256 bits with first n terms as 0:

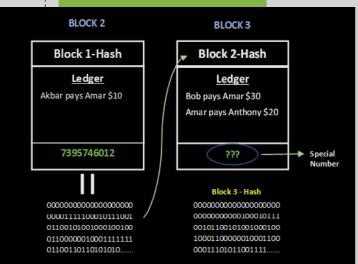> **SHA256(transactions in current block, hash of previous block, special number)**
>
> **= hash of current block**

How hard do you think it will be to compute this special number?

Given that the function is cryptographic, the only way to find out this number is by guessing. Let's say for n=40, then by probability, there will be 2^{40} cases that require a huge amount of computational power to deduce this special number. Whosoever amongst the miners can compute this value the fastest, gets to add the block to the blockchain in return for a block reward. This process is called 'mining'. Since the function takes the hash of the previous block, it is impossible to swap or forge the information in any of these blocks. Hence, called an immutable chain of blocks. This multi-level cryptographic verification of each transaction or information in a community-led decentralized network promotes transparency and minimizes the possibility of forgery in the system.

Coming back to the example of blockchain marriage as mentioned earlier. Marriage Unblocked, a 2014 initiative of the Swedish brand Bjorn Borg, aims to provide a blockchain-based digital platform where anyone can marry and exchange vows irrespective of their sexual orientation and beliefs. The records can be kept anonymous for those in potential danger. Quite unconventional, isn't it? Blockchain has found its way through the most creative fields of all time, yet there is a lot to explore.

Tejaswi Joshi | Analyst, QCI

WATER FOOTPRINT OF JUNK FOOD VERSUS TRADITIONAL FOOD

The changing food consumption pattern is putting a lot of pressure on environment and human health. Introduction of a new superfood every month is affecting the nature, livelihood of farmers and health of a mankind at its peak. To make sure a sustainable food choice, a mix of both consumption and production side changes are essential. However, there is very less awareness about the water associated in production of these highly consumed, trendy food items.

Agriculture by far is the highest user of water and with increase in population the expected increase in agriculture production needs to be increased by 50% by 2050 as compared to 2012 to meet the growing demand of food leading to more use of water.

how much water do you eat?

What is Water Footprint?

Similar to Carbon footprint, Water footprint is all the water that we use. The water footprint of food means all the water that is utilized in the production of that particular food item; it is an indicator to track human pressure on water resources. Both direct and indirect water use in a complete life span is captured in Water Footprint. Direct water use means the consumption of water directly by the consumer and the entire amount of water incorporated in the supply chain for the production of goods consumed by people in a country is referred to as indirect water usage, this is also known as virtual water.

Water Footprint: Local and Imported

Non-traditional diets that include meat are putting pressure on environment by consuming about 5000 litres of water per person per day in comparison to same a traditional vegetarian consumes 2000 litres of water per day. Farmers suffer greatly as a result of our country's ever-changing diets. The humble meal is transformed into superfood and imported from rich countries, causing local farmers to suffer and increasing virtual water use through transportation. People, for example, are ignorant of the benefits of local products such as Indian berries and are lured to blueberries, which are not cultivated locally. As a result, a large number of individuals consume blueberries imported from other nations without considering their carbon and water footprints. Indian farmers incur significant losses as a result of this practise.

Water Footprint comparison of Junk Food and Traditional Food

The hidden cost of everyone's favourite burger is more than just the price. In the manufacturing process of one burger a shocking amount of 2000 litres of water is consumed, the contents of an Olympic-sized swimming pool are barely enough to equal 1,250 burger.

A traditional Indian Thali surprisingly uses less virtual water than the junk food.

Hence, alternative protein sources will provide more sustainable and ecologically friendly manufacturing procedures. This will also allow for the sustenance of a booming global population.

What should future diet look like?

This problem has been caused by a lack of awareness about water footprint, which may be remedied by sharing knowledge about virtual water use. As we can see the nutritious content of any packaged product, the water footprint should be put on the package to make consumers aware. This will also help to minimise the quantity of garbage produced by households.

The one Packaged Drinking Water bottle requires around 17 litres of virtual volume water, which should be noted on the label to raise customer awareness.

Water scientists all across the globe urge that we meet 95 percent of our daily needs through plant-based, locally produced food to prevent global food and water crises. Increasing interest in vegetarian cuisine and making a locally produced item a super food can benefit farmers' livelihoods as well as our fading health.

UN environment assembly | THINK BEYOND | LIVE WITHIN

#SolveDifferent

Preserving our precious natural resources

How much water is in your burger?

On average your hamburger uses **3,140 litres** of water:

- **83 litres** for 2 slices of bun bread
- **408 litres** for 3 slices of bacon
- **151 litres** for 1 slice of cheese
- **2,500 litres** for beef patty
- **4 litres** for 2 slices of tomato
- **0.7 litres** for 1 leaf of lettuce

Plant-based burgers:

- use **75-95%** less water
- use **93-95%** less land
- cause **87-90%** fewer emissions

Food Items in a Basic Indian Thali (100 grams)	Water used in litres
Roti	225
Rice	90
Pulse	300
Vegetable (potato)	115
Total	730

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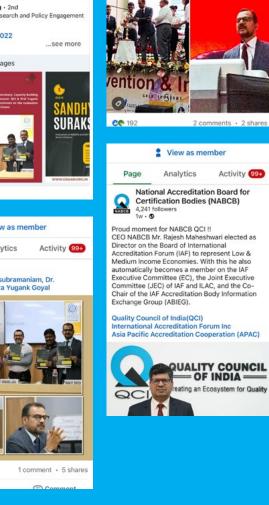
Dilip Kumar Gayen

Manufacturing and Business Excellence Expert, East West Infosolutions

TECHNIQUES OF SPC AND SQC FOR MANUFACTURING, SERVICE AND QUALITY CONFORMANCE FOR CUSTOMERS AND INTERNAL EFFICIENCY

Process and Quality control Techniques and Technology allow manufacturers and service providers a mechanism to restrain the operations & quality successively within the specified limits. Process control techniques & solutions are too vital to establish more specific limits to maximize customer's delight for profitability always to ensure most value-added process for quality with safety.

Industry applies several types of control systems, which are functionally divided into (1) Manufacturing Stannard Operation, (2) Various levels of Quality Control (Input, Output, FPI, IPQC & LPI, PDIR etc.), (3) Cost & Budgetary Control (4) Behavioral Control, (5) Control of Performance for controlling the growth, (6) Profit control. Different organizations and industries accentuate different types of control, as per applicability.

PROCESS COULD BE CONTROLLED WITH SOME STEPS AND METHODS

PROCESS CONTROL STEPS

| Setting the standards | Measuring the performance | Comparing the performance to the set standards | Determining the reasons for any such deviations for prioritization | Take corrective action with Prevention |

Various Control Steps

The four types of strategic control are: premise control, implementation control, special alert control and strategic surveillance. Each one provides a different perspective and method of analysis to maximize the effectiveness of your business strategy.

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METHODOLOGY AND TECHNIQUES FOR CONTROL

Management, Analysis, Monitor and Control Processes

Accounting & Control through Audit

Quality Control, Statistical Control & Charts, Control through Network, Management Information System and Overall Control System

Break Even Analysis, Standard Costing

ABC Costing, Budgetary Control, Inventory Control

Types of Industrial Control Systems

Programmable Logic Controllers (PLCs)

Intelligent Electronic Devices (IEDs)

Supervisory Control and Data Acquisition (SCADA) and Dashboard's

Programmable Automation Controllers (PACs)

Human-Machine Interface (HMI)

Industrial Automation and Control Systems (IACS)

Remote Terminal Units (RTUs)

Industry describes the Statistical Quality Control (SQC) as the application of the 14 statistical and analytical tools (7-QC and 7-SUPP) to monitor process outputs (dependent variables). As per ASQ, Statistical Process Control (SPC) is the application of the same 14 tools to control process inputs (independent variables), and both terms are often used interchangeably, SQC includes acceptance sampling where SPC does not.

STATISTICAL PROCESS & QUALITY CONTROL (SPC & SQC) WITH 7QC TOOLS, 7-SUPP AND 7M TOOLS

STATISTICAL PROCESS AND QUALITY CONTROL (SPC & SQC) 7QC TOOLS, 7-SUPP AND NEW 7M TOOLS

7QC Tools

Histograms
Check Sheets
Pareto Charts
Cause and Effect Diagrams
Defect Concentration Diagrams
Scatter Diagrams
Control Charts

7 M Tools

Affinity Diagram
Interrelationship Digraph
Tree Diagram
Matrix Diagram
Prioritization Matrices
Process Decision and Program Chart
Activity Network Diagram

Seven supplemental (7-SUPP) tools

Data stratification
Defect maps
Events logs
Process flowcharts
Progress centers
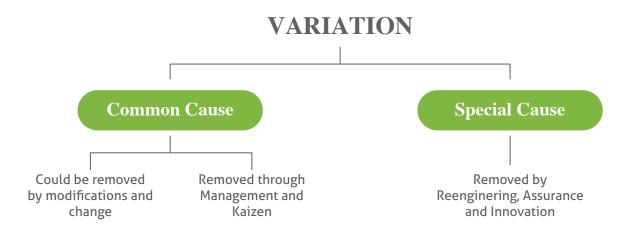Randomization
Sample size determination

SPC and SQC Tools

The control chart is a graph used to study how a process changes over time. Data are plotted in time order. A control chart always has a central line for the average, an upper line for the upper control limit, and a lower line for the lower control limit. These lines are determined from historical data.

Types of Control Charts (SPC) are X bar control chart, Range "R" control chart, Standard Deviation "S" chart (to monitor the process variability, as the standard deviation), Attribute Control Charts (specifically designed for tracking defects, also called non-conformities), "U" and "C" charts (U-chart is an attributes control chart used with data collected in subgroups of varying sizes, C-chart is used to monitor the number of defects in a sample), "P" and "NP" charts (P and NP control charts are used with yes/no type attributes data) and Pre-control Charts.

The Law of Variation is an important part in quality management which involves in the difference between an ideal and an actual situation.

Variation or variability is most often encountered as a change in data, expected outcomes, or slight changes in production quality. Variation usually occurs in four separate areas: Special causes (special cause variation, also known as signal cause variation, arises because of unusual circumstances and is not an inherent part of a process), common causes (which is fundamental to the process and always be present); other two are Tampering and Structural variation.

VARIATION

Common Cause

Could be removed by modifications and change

Removed through Management and Kaizen

Special Cause

Removed by Reenginering, Assurance and Innovation

Types of Variations in Quality Management

CONCLUSION

Quality and production managers in the progressive industries apply these Tools as a Span of SPC implementation in the plant with the Implementation Framework under the existing SoPs, FPCs and Process Time with Manpower with Skills requirement matrix. Quality critical production lines develops Manufacturing, Quality and M/c SoPs for the Processes & Products with WIs. It is implemented in reduction of NCs in the Process in Defects / Rework / Rejection analysis, action plan and improvement and training and orientation on NCs. After SPC analysis, people use the improvement Tools of Action plan through DoE, ANNOVA, CPk, 7QC, A3, 8D etc., for improvement through PDCA and Reengineering.

Rajesh Deorari

Director (IQAC), Uttaranchal University

EQUILIBRIUM BETWEEN ACADEMIC EXCELLENCE & API SCORE

The University Grants Commission (UGC) implemented the academic performance score to upgrade the quality of education and research in India. However, academicians have different opinions about this. Here we will investigate the viewpoints and challenges of academicians who work in various private and public institutions and explore the factors that are contributing to their acceptance or rejection, notably by a third category, namely the "Research- Category."

Academic responsibilities in an Higher Education Institution (HEI):

In any educational institution, a variety of academic activities take place like:

1. Teaching-learning
2. Knowledge creation, dissemination
3. And Outreach/Extension

These activities must especially focus on student-centric approaches to involving and engaging students in academic activities that are likely to provide the desired learning outcomes. Every academic endeavour ought to have a clear purpose, be beneficial, and have demonstrable impact with outcomes. The teaching community's first and foremost moral responsibility must be to instil in the students an analytical, research-based mindset that encourages them to dig deeper into the fundamental concepts they learned in the classroom and try applying them to solve problems in various spheres of life logically.

Academic Performance Indicator (API)

API is seen as a quantitative metric that illustrates the growth of a student, teacher, and institution as a whole.

The three key categories under the API Capping include:

Category 1

Teaching-learning & evaluation related activities with a weightage of approx. 51.4%

Category 2

Co-curricular, extension and professional development related activities with a weightage of approx. 20 %

Category 3

Research Activities with a weightage of approx. 28.57 %

According to the UGC guidelines under the Career Advancement Scheme (CAS) for recruitment and promotions at the institutional or university level advancements, having a strong API Score is a need of time for any member of the teaching fraternity in order to excel in his or her academic field.

Equilibrium between Academic Activities & API

The co-curricular, extension, professional development-related activities, and high-quality intensive research with an impact to improve the individual API Score is a herculean task under the inevitable pressure of meeting the challenges between the conduct of spontaneous academic activities under the teaching-learning and evaluation processes. In practise, the majority of the teaching community is unable to meet this challenge due to the excessive additional administrative responsibilities to expedite for teaching-learning assignments, committee assignments, and student's advisee assignments with much more.

> API is seen as a quantitative metric that illustrates the growth of a student, teacher, and institution as a whole

Major challenges to maintain this equilibrium?

The time restriction along with faculty experience and less exposure to the various career advancement schemes are the prior reasons, why a faculty member struggles to find enough time from the academic hours of teaching and learning to focus on engaging in qualitative research while attempting to strike a balance between the conduct of academic tasks and the API Score. As a consequent result, the work-life balance of an employee is drastically affected leading to more stress and lack of concentration at work, hence leading to higher absenteeism and attrition rates within the organization.

A few top reasons for work-life imbalance in life are:

- The pressure to perform well and stay ahead of the peer group
- Disturbed global economy
- Longer working hours

A few implementable solutions for work-life balance:

- Prioritize your tasks
- Organize
- Time management
- Collaborate at work place
- Use technology to make your task easier
- Don't overbook yourselves
- Make your mental health a priority
- Regularly interact with family and friends
- Try meditation or mindful exercises
- Make time for your hobbies and relaxation

Two powerful tools to overcome the work-life imbalance are:

The 5-why analysis in everyday life as the 1st tool

Asking "Why" repeatedly until you arrive at the root cause is the principle behind this method. By the time you get to the 4th or 5th Why, you will probably get the solution to the real root cause of a problem statement. If you are still without an answer after the fifth why, you can keep asking questions until you find a solution to the problem statement.
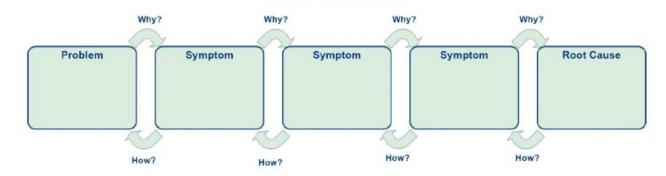
Infographics for the 5-WHYS Guide and Template

The 80-20 Rule to prioritize your tasks in everyday life as the 2nd Tool

One of the most useful ideas for time and life management is the 80/20 rule, sometimes known as the Pareto Principle. The Pareto rule asserts that 20% of your efforts will result in 80% of your results; however, it is not at all a mathematical rule but a notion.

Infographics for the 80/20 Rule to prioritize tasks to achieve the utmost in life:

5-Why Analysis Template
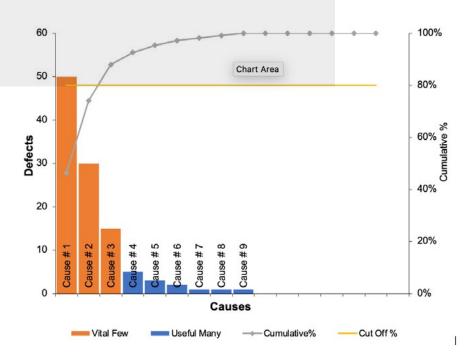
The first 3 Causes cover 87.96% of the Total Defects

		Cumulative Percentage Cutoff:	80%		Vital Few	Useful Many	Cut Off %
#	Causes	Defects	Cumulative%				
1	Cause # 1	50	46.3%		50		80%
2	Cause # 2	30	74.1%		30		80%
3	Cause # 3	15	88.0%		15		80%
4	Cause # 4	5	92.6%			5	80%
5	Cause # 5	3	95.4%			3	80%
6	Cause # 6	2	97.2%			2	80%
7	Cause # 7	1	98.1%			1	80%
8	Cause # 8	1	99.1%			1	80%
9	Cause # 9	1	100.0%			1	80%
10			100.0%			0	80%
11			100.0%			0	80%
12			100.0%			0	80%
13			100.0%			0	80%
14			100.0%			0	80%
15			100.0%			0	80%

insert new rows above this line

> Career Advancement Scheme (CAS) means Career Advancement procedure adopted by the university as per UGC regulations

Conclusion

Identifying the real root causes of work-life imbalance and prioritizing your tasks accordingly will help you improve your individual API Score with regular teaching-learning, evaluation-related activities, and quality research category while maintaining a healthy work-life balance. Understanding and using the above two tools meticulously will help you achieve professional success and personal well-being in true sense.

Rajiv Bhargava | Associate Director, MIGM-ISB

DISCOVERY-DRIVEN PLANNING FOR START-UPS IN INDIA: A PERSPECTIVE

Three thousand raw ideas equal one commercial success! (Stevens and Greg,1997). Would-be innovators face significant odds, and the fact is established by real-life practical examples.

Unsurprisingly, with over 60,000 registered start-ups in India, as many as 90% fail within the first five years. Of the numerous case studies, two high-profile failures stand out: Stayzilla and SchoolGennie. Stayzilla made incorrect assumptions about operational costs and shut down due to excessive financial bleeding. SchoolGennie made unrealistic assumptions about their product-market fit and lost out. Any tools that reduce these significant odds will serve the ecosystem admirably.

In 2016, IBM Institute for Business Value surveyed one Hundred Venture Capitalists (VCS) to identify the leading reasons why start-ups are not successful. Seventy-seven per cent considered undifferentiated business models to be the primary reason.

The business models/ plans are essentially the founders' attempts to bring their 'processed ideas' to life. The high failure rate indicates deep-seated flaws that do not appear at the surface level and need further analysis. Tools such as 'Discovery-Driven Planning (DDP)' offer a systematic way to uncover the dangerous implicit assumptions that would otherwise slip unnoticed and thus unchallenged into the plan.

Source: 2016 IBM Institute for Business Value India Business Survey.

Introducing Discovery-Driven Planning

Most start-ups apply the 'Business Model Canvas' or similar tools to refine their economic paradigm. However, such devices have inherent drawbacks as they build on implicit assumptions that often prove faulty.

The discovery-driven approach first introduced by Rita Gunther McGrath, a Professor at Columbia Business School, systematically converts assumptions into knowledge as a strategic venture unfolds. When new data are uncovered, they are incorporated into the evolving plan. The process is undertaken in five steps:

Define Success

Even before the business is launched, the start-ups team makes a 'Reverse Income Statement.' In practical terms, rather than estimating the project's revenues, they lay down the desired profits and then work out the gains required to achieve the profit goals. As they plug-in all costs and expenses, they obtain a reality check of their

profit-related assumptions at the end of the exercise.

In the example here, the start-ups wishes a profit of $50,000. After plugging-in the expenses, fixed costs, variable costs and the price point to achieve the desired profit, the number of units required to be sold is 7700 per year. Suppose the founders have done a market survey to establish that the current demand for the product is only 3000. They need to take some hard decisions on the feasibility of their idea.

Carry Out Benchmarking

The action helps the team establish how realistic is the 'reverse income statement'! It involves benchmarking the cost and revenue metrics against the market or other businesses offering similar products.

Define Operational Requirements

It is here that the founders must be ruthless with their assumptions. They need to layout all activities related to their project and ask themselves uncomfortable questions. Long-term grandiose revenues are fine, but what matters is how the first and the first ten sales will be made. Founders often take this requirement lightly, resulting in sunk costs and dejections.

Reverse Income Statement	
Full Year Projection	**2019**
	.
Net Profit	**$50,000.00**
Income Tax Expense	30.00%
Profit before Tax	**$65,000.00**
Selling, General, and Administrative Expenses	-$12,000.00
Gross Profit	**$77,000.00**
Cost of Sales	-$154,000.00
Cost per Unit	-$20.00
Revenue	$231,000.00
Price	$30.00
# of Units Sold	**7,700**

Plan to Key Checkpoints

As Rita McGrath states, "plan as far as far out as you have knowledge". The key to the DDP tool's success is setting checkpoints in the journey and revisiting the assumption list at each checkpoint. But how do you decide on the checkpoints? These should be points in time right before your company decides to invest more time and money so that you can either stop the project or redirect it based on what you've learned to date.

Document Assumptions

One of the essential differences between

conventional planning and DDP is writing down assumptions. Putting down thoughts on paper is a complex yet necessary task in DDP. The process compels the mind to identify some of the implicit and hidden assumptions that have the potential to ruin a business. A good strategy would be to make an assumption checklist that can be dynamically updated with changing circumstances.

Assumptions

1. No economic disasters
2. No major shift in policy
3. Continuing trend in the increase of university students
4. Steady supply of raw materials
5. No new major competitors
6. ....

Making DDP Successful

A no-nonsense leveraging of DDP can result in an 'Owner Strategy Statement', which articulates their goals and the rationale behind them. DDP could make the statement a 'living document', revisited whenever meaningful changes to the internal or external environment exist. Clearly defining success puts owners in the position to create a company that accomplishes what matters most to them. It also enables them to make decisions that involve trade-offs and other painful measures.

DDP cannot be relevant to everything. It can read immense benefits to new ventures that face a lot of uncertainty and then test and convert learning quickly. At a suitable time,

a new venture may switch to a conventional plan when the risk and uncertainty are within tolerance, and sufficient checkpoints have been crossed.

The moot question is: how many checkpoints can be made in the journey of a start-ups? In real terms, no one can lay down the number of checkpoints, but Rita McGrath opines that managers shouldn't think past more than four checkpoints and ask themselves, "Do we have enough money to get through the next three checkpoints?"

Most failures in DDP are the ones that make assumptions for the final checkpoint without considering graded assumptions for each checkpoint and modifying them as well as the reverse income statement to match the ground reality. Besides start-ups, DDP remains relevant for companies launching new products. The US Army has also effectively utilised assumption-based planning in its Training and Doctrine Command.

Conclusion

Growth, liquidity and control are the three goals that start-ups seek as they scale up rapidly. Most businesses face trade-offs to achieve their goals and decide their course based on their assumptions. Often start-ups fail because their trade-offs are based on faulty decisions, which are in turn based on incorrect assumptions. In such scenarios, DDP can be a suitable tool for informed decision-making when facing uncertainty and risks.

Sona Sharma

Accreditation Assessor & Trainer, NABCB, JAS-ANZ, FSSAI

SAFER FOOD, BETTER HEALTH

We recently celebrated World Food Safety Day on 7 June 2022 with the theme "Safer Food, Better Health". This has drawn attention and initiate several actions to prevent, detect and manage foodborne related risks and improve health of human.

Access to sufficient amounts of safe and nutritious food is a key to sustaining life and promoting good health. Unsafe food containing harmful bacteria such as e Coli Salmonella, Campylobacter, Listeria etc. Antimicrobials, such as antibiotics, are used to treat infections caused by bacteria, including foodborne pathogens. However, due to their excessive use rather misuse in veterinary and human medicine has resulted to the emergence and spread of resistant bacteria, resulting the treatment of infectious diseases less or ineffective in animals and humans.

Some viruses are transmitted by food consumption. Norovirus is a common cause of foodborne infections that is characterized by nausea, abdominal pain, explosive vomiting, and severe diarrhoea. Hepatitis A virus can also be transmitted by food and can cause long-lasting liver disease and spreads typically through raw or undercooked seafood or contaminated raw produce, parasites or chemical substances

causes more than 200 diseases, ranging from diarrhoea to cancers.

Chemical contamination can lead to acute poisoning or long-term diseases, such as cancer. Many foodborne diseases may lead to long-lasting disability and death. Some examples of food hazards are listed below.

FSSAI is presently running several initiatives such as FOSTAC, Eat Right Campus, and Hygiene Rating Scheme BHOG and FoSCoS

These hazardous micro – organism leads to several issues such as malnutrition specifically affecting infants, young children, elderly and other vulnerable group. Good collaboration between government, producers, food safety business operators and consumers are needed to ensure safe food and stronger food management systems. Chemicals of most concern for health is naturally occurring toxins and environmental pollutants.

Naturally occurring toxins include mycotoxins, marine biotoxins,

cyanogenic glycosides and toxins occurring in poisonous mushrooms. Staple foods like corn or cereals can contain high levels of mycotoxins, such as aflatoxin and ochratoxin, produced by mould on grain. Prolong exposure can affect the immune system and normal growth, or can be carcinogen causing cancer. Similar could be POPs – Persistent organic pollutants, Heavy metals and other chemical hazards which leads to several neurological deceases and can be the cause for still born or miscarriage in women.

Food-borne diseases
– A burden to developing nations

The burden of foodborne diseases to the nations specially to developing and poor countries has often been underestimated due to underreporting and difficulty to establish causal relationships between food contamination and resulting illness or death and lead to manifold economical imbalance.

A rough estimation that more than 600 million cases of foodborne illnesses and 420 000 deaths could occur in a year As per 2015 WHO report highlighting that the burden of foodborne diseases falls

disproportionately on groups in vulnerable situations and especially on children under 5, with the highest burden in developing or low- and middle-income countries.

As per the World Bank report 2019 on the economic burden of the foodborne diseases indicated that the total productivity loss associated with foodborne disease in developing and

Food safety and the emerging world

National economies, trade and tourism primarily depended on safe food supplies and support system, contributing to nation's food and nutrition security.

The total productivity loss associated with foodborne disease in developing and poor countries was estimated at US$ 95.2 billion per year

eating food prepared in public places. Ease of travel, communication and Globalization has triggered growing consumer demand for a wider variety of foods, resulting in an increasingly complex and longer global food chain.

These challenges put greater responsibility on food business

operators, producers and handlers to ensure food safety.

Public heath-A priority

FSSAI is the mandated body by Government of India and advocates "One Nation One Food Law" with key focus on globally benchmarked food standards and practices, ensure consistency in enforcement and manage food testing with standard testing methods and protocol.

To increase the awareness on food safety, FSSAI is presently running

poor countries was estimated at US$ 95.2 billion per year, and the annual cost of treating foodborne illnesses is estimated at US$ 15 billion.

Globalization, easy access to several economic barrier and changes in consumer habits have increased the number of people buying and

several initiatives such as FOSTAC, Eat right Campus, Hygiene rating scheme. BHOG – Blissful offering to God, FoSCoS – Food Safety Compliance system etc.

Governments is keen and putting efforts food safety a public health priority, as they play a pivotal role in developing policies and regulatory frameworks and establishing and implementing effective food safety systems. Food business operators, buyers and consumers need to understand how to safely handle food and practicing the keys to safer food at home, or when selling at restaurants or at local markets as initiated under several initiative by FSSAI.

WHO Response

World Health Organisation aims to strengthen national food control systems to facilitate global prevention, detection and response to public health threats associated with unsafe food. To do this, WHO supports Member States by:

- providing independent scientific assessments on microbiological and chemical hazards that form the basis for international food standards, guidelines, and recommendations, known as the Codex Alimentarius

- assessing the performance of national food control systems throughout the entire food chain, identifying priority areas for further development, and measuring and evaluating

progress over time through the FAO/WHO food control system assessment tool

- assessing the safety of new technologies used in food production, such as genetic modification, cultivated food products and nanotechnology

- helping implement adequate infrastructure to manage food safety risks and respond to food safety emergencies through the International Food Safety Authorities Network INFOSAN

- promoting safe food handling through systematic disease prevention and awareness programmes, through the WHO Five keys to safer food message and training materials

- advocating for food safety as an important component of health security and for integrating food safety into national policies and programmes in line with the International Health Regulations (IHR 2005)

- monitoring regularly the global burden of foodborne and zoonotic diseases at national, regional and international levels, and

supporting countries to estimate the national burden of foodborne diseases; and

- updating the WHO Global Strategy for Food Safety (2022–2030) to support Member States to strengthen their national food control systems and reduce the burden of foodborne diseases

FSSAI working in line with WHO response

Monthly achievements for the month of May 2022

Notification of Food Testing Laboratories: One new State food testing laboratory i.e., State Public Health Laboratory, Manipur was notified under Section 43 (1) of Food Safety and Standards Act, 2006. This has raised the total number of notified primary food testing laboratories to 228.

Progress under Central Sector Scheme 'Strengthening of Food Testing System in the Country including provision of Mobile Food Testing Labs'- a) Upgradation/Setting up of State Food Testing Laboratories.

Capacity Building 14 training programs were organized, out of which 4 Hands-on Training programs were conducted in coordination with EFRAC, Kolkata, Eurofins Bengaluru, Fare Labs Gurugram, and Envirocare, Lab Thane for State/UTs and laboratory personnel which were attended by total 40 participants. These trainings were related to Analysis of Pesticide Residues, Metals, Mycotoxins and Microbial Contamination in different food product categories.

V Umesh Naidu

TQM, Improvement Initiator, Lead Auditor, (ISO 9000), Green Belt - Six Sigma

SWOT AND PESTLE TOOLS OF STRATEGIC MANAGEMENT

To any enterprise, a Strategic Plan is a key part for planning the organization's development and growth. It helps to prepare a realistic vision for business future roadmap and methods to maximize its potential for company's success and expansion. Towards this, an organization deploys a multiple of models to do a prelim critical analysis of existing internal & external factors and current scenarios in which it operates. To carry out this analysis, business analytical models are useful tools that help one to understand the organizational environment and to strategically think through about its business. Though many techniques are available, some are more frequently used than others are. Among the prominent are :

- **SWOT**
- **PESTLE**
- **Scenario Planning**
- **Porter's Five Forces framework**

However, for the scope of this article, it is limited to - SWOT and PESTLE. This short essay attempts to explain the tactical elements involved in the two techniques, considered essential in developing the organisation's strategy.

Decode the acronyms

SWOT

STRENGTHS > WEAKNESSES > OPPORTUNITIES > THREATS

PESTLE

POLITICAL > ECONOMIC > SOCIAL > TECHNOLOGICAL > LEGAL > ENVIRONMENTAL

How are these different

Business Plan, Long-Term Plan and Strategic Plan are distinct processes and not to be mixed up with;

Business Plan also referred as Annual Business Plan (ABP), is a process that sets targets for short term goals by outlining ways and means on how to achieve them;

Long Term Plan (LTP) is focused in establishing goals that are expected to achieve in the next few years, typically with a five-year-window timeline;

Strategic Planning steps back from day-to-day operations to articulate where should the business be heading to - by setting goals, objectives and priorities for the future. It involves assessing relationships to ensure each

department's objectives are aligned to the company's overall goals.

Swot & Pestle

PESTLE and SWOT are heavyweight strategic tools that are key to generate insights, capitalize on opportunities and mitigate threats. Both techniques are useful in decision making; its analysis can be applied in the evaluation of pros

> PESTLE and SWOT are heavyweight strategic tools that are key to generate insights, capitalize on opportunities and mitigate threats

and cons to a range of small, large and new projects & initiatives to identify factors that affects success. Against an ever-changing business environment, getting the PESTLE and SWOT research and analyses right, has never been more important. Despite this, businesses can buckle under their collective weight either through failing to understand how situational and internal factors affect them or by generating erroneous or incomplete findings based on assumptions rather than facts.

Therefore, PESTLE and SWOT requires a dedicated and thorough approach to help the organization know the macro environment in which it operates, get aware on its internal strengths & weaknesses including the external threats & opportunities, understand the business situation from an outside-in perspective thereby to accelerate its potential and run through to success.

What is SWOT Analysis

It is a key tool to develop corporate strategy wherein it analysis to examine four areas of business environment :

Strengths

To identify advantages the business has over its competitors

Weaknesses

To recognise its weaknesses in its operations
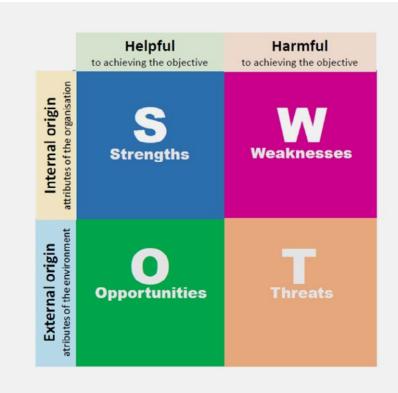
Opportunities

To identify the external trends that it can take advantage of

Threats

To assess external conditions that may be hurdles and can have a negative impact on Business

The SWOT framework was developed by Albert Humphrey, an American

consultant at Stanford Research Institute during 1960s and early 1970s. For any growing enterprise, the key to success is its ability to make well informed business decisions for its future growth supported by as much industry data as possible to identify the opportunities and risks that could jeopardize a particular move.

One of the first things many businesses do during their planning process is to conduct a SWOT analysis. The study assesses the strengths, weaknesses, opportunities and threats to help ambitious businesses tackle its biggest challenges and explore the most lucrative potential markets.

The ultimate goal of a SWOT analysis is to reinforce the enterprise strategy by assessing all of its business's strengths and weaknesses, as well as

the potential opportunities and pitfalls within its marketplace. SWOT analysis can be similarly used to ensure businesses make objectives, which are realistic, and attainable, minimizing risk and maximizing efficiency.

Examples
INTERNAL SWOT ANALYSIS

The first two letters in SWOT, S (Strengths) and W (Weaknesses), refer to internal factors within the business. It relates to the resources and industry experience already available in the company.

Some of the strengths and weaknesses businesses typically consider about their own operations:

Financial resources – funding and income sources and potential investment opportunities

Physical resources – business locality, facilities and industry equipment

Human resources – staff base and target demographics

Natural resources – access to intellectual property (e.g. trade marks, patents or copyrights)

Existing infrastructure – software, staff programmes, departmental hierarchies etc.

Examples
EXTERNAL SWOT ANALYSIS

The final two letters in SWOT, O (Opportunities) and T (Threats), refer to external factors that could influence its business. It's the task of decision makers of the company to ascertain whether any of the following factors are a direct or indirect opportunity or threat to the company, such as :

External funding – e.g. legislature, gifts, donations and other potential sources

Industry trends – technological developments, new product lines and shifting consumer demands

Economic movements – financial trends on a local, national and global scale

Target demographic – evolution of audience i.e. age, race, gender and culture

Working relationships – dealings with partners and suppliers

Regulations – i.e. political, environmental and economic

By pairing internal weaknesses with external industry threats, it is much easier to pinpoint the most serious hurdles for the business to overcome. Equally straightforward is to identify the biggest, most lucrative business opportunities and strengthen company's proposition by underlining its strengths and gaps in the market.

How and when to use SWOT analysis effectively

The overall understanding of the business' strengths and weaknesses, combined with the threats and opportunities of company's marketplace puts it in a significantly better position to take positive action. Without the SWOT analysis, it can be extremely difficult to identify areas for change, set clear performance goals and develop an action plan to stay ahead of the competition.

Using SWOT analysis, it's possible to justify a business decision that's already been decided upon. It's also a step forward to creating a robust strategy to build upon its existing strengths and industry opportunities.

The most common reasons for using SWOT analysis are :

- Identify new solutions to existing business issues
- Pinpoint new potential barriers to current business objectives
- Agree on the next direction for business to take
- Discover possibilities and limitations for change
- As a means of brainstorming business ideas and better understanding the competition
- As a means of better informing key stakeholders

Once the business strategies are developed to minimize its weaknesses and maximize its strengths and opportunities, it then becomes essential to regularly review them internally. Agility after all, is key to ensuring company recognizes its present assets (positives) and inherent flaws (negatives).

The four SWOT analysis-based strategies are as follows:

Strength-Opportunity strategies

Leverage business strengths to maximize industry opportunities

Strength-Threats strategies

Leverage business strengths to minimize industry threats

Weakness-Opportunity strategies

Minimize business weaknesses to maximize industry opportunities

Weakness-Threats strategies

Minimize business weaknesses to minimize industry threats

What is PESTLE Analysis

Originally developed in 1967 by Francis Aguilar, an American scholar and Harvard professor on strategic planning.

PEST or PESTLE is a strategic planning tool to help organizations identify external factors that influence business environment and evaluate threats and opportunities for the business. It analyses the political, economic, social, technological, legal and environmental factors in the organization's external environment, which can affect its activities and performance. It involves the collection and portrayal of information about external factors, which have or may have an impact on business.

The main difference between PEST and PESTLE analysis is the addition of two other factors to PESTLE analysis. Other than the legal and environmental factors, both tools perform essentially the same functions.

Political : To determine how the current direction of political parties, laws, global issues, legislation and regulations can influence business development and growth

Economic : To examine effects of interest rates, taxes, inflation, stock markets, consumer confidence and other economic metrics

Social : To acknowledge changes in lifestyles, buying trends, advertising targets, media, ethics, demographics, culture, ethics and publicity factors

Technology : To evaluate organisation's current technology whether it is up-to-date with regard to external innovations, state-of-art engineering, licensing, patents, research and global communications

Legal : To anticipate new laws and regulations, proposed legislation that may come into effect, any previous passed legislations that can impact business operations

Environment : To identify and consider environmental factors

surrounding the company. Its main purpose is to know what external forces may affect the organization and how those factors could create opportunities or threats to its business.

PESTLE Analysis helps in:

• To find out and understand current external factors affecting an organization which may/ will influence the business, so the business manager can work on facts rather than assumptions

• To identify what external factors could change in the future

• To mitigate risks and take advantage of opportunities to remain competitive

• To exploit the changes (opportunities) or defend against them (threats) better than competitors would do

• To develop a better long-term strategy

Strategic Planning through PESTLE Analysis

Business leaders knows the importance of staying ahead of the curve. But changes outside one's control constantly influence its business. If timely identification of external factors not done, it could run a risk of endangering the business.

The analysis helps entrepreneurs discover what factors could impact their business and develop strategies to handle those changes. Learn the advantages of its stands to gain from a PESTLE analysis and how to complete.

PESTLE Analysis helps in to

• Understand current external influences on the business so it can work on facts rather than assumptions

• Identify what factors could change in the future

• Mitigate risks and take advantage of opportunities to remain competitive

• Develop a better long-term strategy

Understanding PESTLE as a tool

PEST or PESTLE analysis is a simple and effective tool used in situation analysis to identify the key external forces (macro environment level) that might affect an organization. These forces can create both opportunities and threats to an organization.

Goals of doing PESTLE analysis

The objective of PESTLE is to get an understanding of the overall picture

PESTLE is particularly useful to understand the overall market environment. The more threats or risk factors in the market, the more difficult it is to do business. By analyzing the market forces at play, the entrepreneurs will be more strategic in their planning and decision-making.

Additionally, PESTLE analysis helps organizations strategically plan projects and initiatives so that it only focuses on projects that have the greatest chance of success. It also gives them the tools to forecast changes, so the organization grows with those changes instead of working against them.

When to do a PESTLE analysis

PESTLE analysis is best used when there is a need for a big-picture understanding of its business. A best time to do a PEST analysis include :

• When starting a new business

• When uncovering a major problem

• When business is pivoting

• When recognising impending changes in one area (e.g., politics) and want to re-evaluate the market

It needs to be remembered, that PESTLE analyses are macro-level evaluations. It should not be conducted for smaller internal projects or issues.

PESTLE vs SWOT Analysis

They are often used together to better understand the business environment. However, the two frameworks are distinct and apply to different levels of business analysis.

PESTLE analysis focuses on the big picture and impacts on overall business, the market, or an important decision. It is best used for market research and broader analysis of the business environment.

SWOT analysis, on the other hand analysis focuses in more on the organization itself to identify its Strengths, Weaknesses, Opportunities, and Threats. It is often conducted at the beginning of a new project or to evaluate a product line.

Combining these micro and macro-level analyses of business will help to understand a complete picture of the market and industry and the business's unique opportunities so the entrepreneur can mitigate risks and effectively plan for the future.

Why use SWOT and PESTLE Analysis

SWOT and PESTLE are used by business managers to make a systematic and thorough evaluation of pros & cons of a new business or project to enable them take major decisions. The process gives decision-makers a better awareness and understanding of the changes that may occur and the impact that these changes may have on their business. They can be applied to large projects as well as smaller ones such as marketing campaigns, reorganizations, new production methods, introductions of new products etc. The process brings together views of employees to result in a better understanding, acceptance and successful implementation of projects. While SWOT analysis focuses on a company's internal strengths and weaknesses, a PESTLE analysis concentrates on the external factors. Using both methods together produces a comprehensive evaluation of a project. The process of analyses brings together views of employees to result in a better understanding, acceptance and successful implementation of projects.

On using the two analyses together, they result in:

• Provide a simple structure to conduct the analysis

• Bring together various departmental skills with a common goal

• Identify potential threats to the organization and helps to reduce the impact

• Encourage employees to adopt a strategic thinking mindset

• Create a method to find and exploit new opportunities

• Evaluate the impact of various decisions before implementation

In Essence

• Implementing SWOT and PESTLE analyses requires a thorough understanding of the business and the world outside it

• It requires careful research which could take many forms such as internet research, probing government white papers, qualitative focus groups, quantitative statistical surveys and competitor intelligence to truly understand and analyse both, situational factors and internal business dynamics, that could affect business future growth

• The two analysis are not separate ways to do the same thing, but they compliment each other for effective outcomes. These analysis are a must for any business enterprise not only to 'stay ahead of the curve' but also to 'stay ahead of the pack' to give the competitors a run for their money !

Benefits of using SWOT and PESTLE Analysis

CONSULTANT REGISTRATION
SCHEMES OF NBQP

Objective:
To serve as a consultant in various sectors in order to diligently Evaluate, Plan & Implement Improvements in organisation's processes and practices.

Prerequisites:

1. Specific knowledge & skills of relevant Management Systems

2. A sound understanding of issues & challenges related to risk management

3. General knowledge of national and international certification/registration and accreditation

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Benefits:

▶ Unique Professional Identity through Registration certificate

▶ Visibility of his/her details in NBQP Website

▶ Free subscription of Quarterly QCI Magazine i.e. Quality India

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Schemes :

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- Environmental Management Systems (EMS)-ISO 14001
- Food Safety Management Systems (FSMS)-ISO 22000
- Information Security Management Systems (ISMS)-ISO 27001
- Occupational Health and Safety Management Systems (OHSMS)-ISO 45001
- Energy Management Systems (EnMS)-ISO 50001

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

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Dear Quality Aspirants / Professionals,

Warm greetings !

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

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

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

Best Regards,
CEO-NBQP(QCI)

For any membership related queries, you may connect:
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