



#### Message from National President, NIQR

I am delighted to communicate to you all through this news letter. In the last couple of years due to pandemic our life has changed a lot. The pandemic has thought us lot of far reaching lessons and I am really happy that most of us were able to face the pandemic and come back to normal even though some of us have lost near and dear due to pandemic.

In the last two years NIQR has been organizing lot of online training program thanks to the commitment and support from the various people. I am happy that we have also restarted the regular class room training. With the current global scenario where the thrust is going to be e-mobility digitization and IoT there is a huge scope for NIQR. NIQR is looking to play a big role with regard to the training of the personnel and also actively work with industries to make them ready to face the current challenges. I seek the support from all members to achieve these objectives and make NIQR a "PAN INDIA" Institute.



With warm Regards,

**S Muralishankar**, National President, NIQR

#### Message from Chairman Chennai Branch



At the outset I am happy to meet you all through the Second Newsletter of the present EC.

We have been regularly organizing training programs for the benefit of MSME's which are always well attended by the industries. I wish to have the similar support for the upcoming programs also.

We also conducted couple of programs for our college student chapter and appreciations to the team who made it as successful events.

School Student chapter is one of the new initiatives by the present EC which is well appreciated by the participating schools. Activities of School student chapter will be restarted as the schools are on their routines after the summer holiday.

I use this opportunity to appreciate LUB team for their successful execution of Defence expo. Also we are happy for the little contribution from NIQR as well.

With warm Regards,

**P T. Bharani Perumal**, Chairman - Chennai Branch

#### Message from Secretary Chennai Branch

**"They only live, who live for others, the rest are more dead than alive" – Holy Mother Sri Sardha Devi.**

We intend to stand as an example of the above statement to the possible extent. We are in the midst of the fourth industrial revolution – as we are in the process of fully understanding of Industry 4.0. the next level Industry 5.0 has already arrived. Unless we are fast enough to capture and utilise the opportunities to tackle the recent challenges at the speed in which they enter, we will miss the bus to compete.

As NIQR commitment to provide business assistance to MSME's, we have initiated various activities that benefits MSMEs in the long run. The COVID-19 / OMICRON pandemic is impacting every one across the globe whether directly or indirectly affects people in all corners of the world. Let us help one another to come out of this crisis. We are already in the process. None of this would have been possible without the sheer commitment and determination of our entire NIQR team. Thank you once again for all your hard work and looking forward to your continuous support to spread our wings globally and to take NIQR to the next level.



With warm Regards,

**Lion. Dr. Ver Chezhiyan**, Secretary - Chennai Branch

#### From Editorial Desk



From Editorial Desk The industrial forums / associations contribute a lot to the society provided they communicate what they are doing / plan to do to the rest of the society there by promoting their interest in the members / non-members which leads to enhancement of the competitiveness (to the next level). To do so the innovation becomes one of the main pillars. Many inventions (innovations) are taking place around the globe whether we notice it or not. Through this news letter series we try to capture the thoughts of young / expert brains to reach our members on various subjects through abstracts and articles. We believe

that this approach will create a better platform to sustain and to improve further upon. The current COVID 19 crisis has shown just how interconnected the world is today. That may present / future challenges too, but it also enables us to learn new skills like work from home / remote meetings / effective team work etc., which becomes part and parcel of our life. The newsletter also has trainings / activities conducted / future training calendar for your effective contribution / participation. Together we will make our NIQR reach higher levels in future.

With warm Regards,

**P. Kothandarman & S.S. Balasubramaniam & Dr. E. Vijayaragavan**

Editorial Committee – Chennai Branch

## “NIQR Activities”



**Student Chapter Program** on 12 Feb 2022 at CSC Vivekananda Vidhyalaya, Kakkalur, Thiruvallur. Speaker **Mr. S. Raja, Treasurer, NIQR Chennai Branch** educated the students passionately on topics like Small kaizens, Team Work(How to be in team), Reduce, Reuse and Recycle, Problem Solving Technique and Innovative ideas for Small Projects Which was highly informative and useful to the students. **Mr. V. Kumar, Executive Member NIQR** has co-ordinated the entire event.



**KAIZEN Program** on 19th Mar 2022, at National Productive Council of India, Chennai, Program was honored by our chief guest **Mr. Hariharan Ramamurthy MD, Srimukha, Precision, National Vice President of Laghu Udyog Bharath.** Speaker **Mr. S Murugan, Vice Chairman, NIQR** briefed the participants ardently on what is Kaizen how to analyse and implement in our working environment.



**GLANCE ON 8 D PROBLEM SOLVING APPROACH Program** on 26th Feb 2022, at National Productive Council of India, Chennai, Speaker **Mr. S. Raja, Treasurer, NIQR Chennai Branch** briefed the participants ardently on what is 8 D Technology and how to analyse and resolve the problem in order to meet the customer requirements, The basic steps of 8 D was very well explained with very relevant and practical examples. Participants are practised with 8 D Report exercise which make them to understand the concept clearly and practically. He also compared 8 D Technology with Ramayana, which was really awesome.



**“MOU signed between NIQR Vs Meenakshi Sundararajan Engineering College, Kodambakkam, Chennai.**



**“QUIZ Program on TQM Principles”** on 30 Apr 2022 at Meenakshi Sundararajan Engineering College, Chennai. **Dr K S Babai, Secretary, Meenakshi Sundararajan Engineering College,** has honoured the Award felicitation function as the Chief Guest. **Mr. P Kothandaraman, Chief Executive, TRAINCONST, NIQR Executive Member & MR R Sriram, Vice President, India Pistons & NIQR Executive Member** were the jury for the final round. **Mr Bharani Perumal & the team** were the back bone of this event.





**“LEARN TO LIVE Program”** training program on 16th Apr 2022 at SRM IST Vadapalani Campus, Chennai.

**Lion. Dr. V.S.V. Ver Chezhiyan**, Secretary - Chennai Branch has preside over the program.

**Dr. E. Vijayaragavan**, SRM IST, Kattankulathur was the guest of honor and was the back bone of this program. Trainer **Mr. P. Kothandaraman**, Chief Executive TRAINCONST, NIQR Executive Member has conducted the program very lively and has quoted many personnel experiences of life to the subject. Participants interaction and Q&A sessions were excellent and exhibited the participants keenness in learning many things.



Training Program on **“Creativity Thinking”** on 25th Jun 2022, at the Centre for Lean and Six Sigma (CLASS) at

SRM Institute of Science and Technology, Kattankulathur. **Lion Dr V.S.V. Ver Chezhiyan**, Secretary - Chennai Branch has preside over the program.

**Dr. E. Vijayaragavan**, SRM IST, Kattankulathur has delivered the vote of thanks.

Trainer **Mr. N. Jagannadha Rao**, NIQR Executive Committee Member, Chennai Branch has conducted the program nicely inducing creativity thinking in the audience. Participants interaction and Q&A sessions were appreciable..

## Paper Presentation “TOTAL QUALITY MANAGEMENT” in VIRTUAL MODE on 18th Jun 2022.

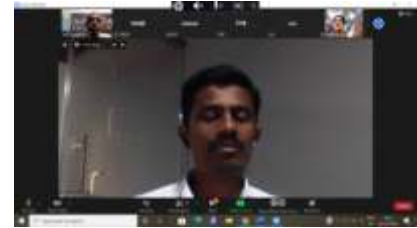
**Lion. Dr. V.S.V. Verchezhiyan**, Secretary of NIQR Chennai Branch welcomed the participants .

**Mr. N. Jagannadha Rao** and **Mr. C. Sundara Vadivelu**, EC Members of NIQR ( Chennai Branch), were members of the Jury for the competition.

4 participants who presented their papers. **Mr.Rohan Mohata**, on “Increase of Productivity and Implementing visual management on shop floor”, - **WINNER of the competition.**

**Ms. S. Sunitha**, a Research Scholar, presented on **“A study on Service Quality Expectations of Customers at TRAVEL AGENCIES”** – Runner.

**Lion. Dr. V.S.V. Verchezhiyan** proposed a vote of thanks



**Guest Lecture Program on “Paperless Digital Quality Systems”** via Zoom platform on 2nd Apr 2022,

**Mr. E. Nallathambi**, Co-Founder & amp; CEO, BizReNow Solutions LLP, delivered a Lecture on “Paperless Digital Quality Systems” in online Zoom Application.

**Lion. Dr V.S.V. Verchezhiyan**, Secretary – NIQR Chennai welcomed the gathering.

**Mr. P.T. Bharani Perumal**, Chairman NIQR – Chennai Branch gave the inaugural Speech, **Mr .S. Raja**, Treasurer NIQR- Chennai Branch introduced the Chief guest.

**Mr. S. Rajasekaran**, Past National President, the Chief guest shared views about the importance of the topic “paperless digital Quality System”.

**Mr. S. Murugan**, Vice Chairman NIQR- Chennai Branch gave a brief introduction about the speaker **Mr. E. Nallathambi.**

Speaker gave a brief knowledge about Paperless Digital quality system was useful to each organization.

Over all 65 Participants attended the Lecture Program and acquire knowledge. The entire session was highly interactive for all the participants. We also received very nice feedback from all the participants.



Training Program on **“Daily Work Management (DWM)”** on 21 st May 2022, **Mr. P Kothandaraman**, Chief Executive TRAINCONST,

NIQR Executive Committee Member has introduced the speaker to the audience. Trainer **Mr. C Sundaravadivelu**, NIQR Executive Committee Member has conducted the program very nicely and in simple manner.

He quoted lot of day-to-day examples also couple of class room exercise to get the hands on feel. Participants interaction and Q&A sessions were excellent. **Shri Jagannatharao**, NIQR Executive Committee Member has delivered the vote of thanks..



*Training Program on  
**“Basics of Total Productive Maintenance”**  
 on 21st Apr 2022 at the Centre for Lean and Six Sigma  
 (CLASS) at SRM Institute of Science and Technology,  
 Kattankulathur.*

***Dr. E Vijayaragavan**, SRM IST, Kattankulathur  
 has delivered the vote of thanks.*

***Mr. V Kumar Executive Committee Member NIQR**  
 Chennai Branch delivered a lecture nicely.  
 Participants interaction and Q&A sessions were appreciable..*



*Training Program on **“7 QC Tools”**  
 on 3 Sep 2022 at the Centre for Lean and  
 Six Sigma (CLASS) at  
 SRM Institute of Science and Technology, Kattankulathur.*

***Dr. E Vijayaragavan**, SRM IST, Kattankulathur  
 has delivered the vote of thanks.*

***Mr. N. Jagannadha Rao**, Executive Committee Member  
 NIQR Chennai Branch conducted program nicely  
 quoting lively examples. Participants interaction and  
 Q&A sessions were appreciable..*

## “ATTRACTIVE QUALITY”

**Compiled by : S. KUMAR**, Asst. Vice President – Yokohama Tires, Visakapatnam



Attractive Quality defined as Quality Elements that when fulfilled provides satisfaction but when not fulfilled are acceptable. For example in a hotel leaving mints on one’s pillows would make them so happy and considered to be an attractive quality. However if it not provided might not make the customer unhappy.

Attractive Quality requirements are neither explicitly expressed nor expected by the customer. This an implied needs. These attributes are not normally expected and often unintentionally surprise. Fulfilling these requirements leads to more than proportional satisfaction level.

Attractive Quality often referred as Customer Delight (Delighters). It is generally focused on customer specific requirements which make them proud to use these product or services.

However over period of time these delighters will become the basic requirements as like air conditioner become basic requirements and navigation control going to be the basic in the passenger car.

## “Seminar Presentation at Defence Technology Expo”



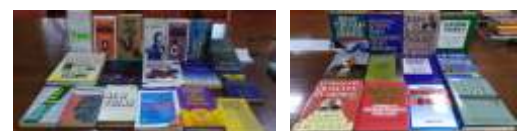
For Defence Technology Expo on 26 – 28 May 2022, NIQR is one of the **sponsoring organisation**. Mr **P Kothandaraman**, Chief Executive TRAINCONST and **Executive Member of NIQR** has delivered a session on **“How to go about creating a Defence Vertical”**



## “Book Donation to NIQR Library”



**Mr. Sivamakrishnan**, Former Chairman, Chennai branch has donated some books to NIQR. Members are requested to make use off. NIQR hereby thanks the former Chairman Mr. Sivamakrishnan for his generosity.







## “Linking the Dots”

**Naveen R S**, 3rd year, B.Tech, Department of Mechanical Engineering  
Meenakshi Sundararajan Engineering College

We all love creative stuff. Today we are bombarded with creativity wherever we look. But what is happening inside our heads when we experience creativity? Quality is indispensable in the industry but just making things better does not necessarily help us get from zero to one. Suppose you were a horse carriage manufacturer, no matter how much you improved its quality you won't end up making an automobile. Here, we see about the creative process in the human brain, how you can implement it in your life and how essential it is for our future development. Creativity is for everybody, creative thinking is an integral part of all occupations and situations. Generally speaking, our mind consists of two parts- our conscious and our unconscious or subconscious. What we constantly experience in our day-to-day life is the conscious part of it. The unconscious one is like a back-end developer; it is responsible for the long-term storage of information, memories, and values. Our creative thinking lies in this back end but not completely, creative impulses may originate from the back end but it needs conscious processing to edit and integrate them into one solution. Neuroscientists define creativity as combining and recombining mental representations (mental imagery) to create novel ideas new ways of thinking. If you look beneath the surface you find it's nothing but just connecting the dots. Creative thinking involves two types of thinking, convergent and divergent. Convergent-where you combine multiple, sometimes very different pieces and find one thing that links them. Divergent-generating multiple different ideas from a single starting point. Being creative means creating or producing something new and useful from apparently unrelated things, in terms of intelligence this means making new or unusual connections. It is one of the complex human behaviour- relating our conscious inputs with our memories and skill to come up with a unique way to approach a problem. This certainly implies that we need diverse connections between different regions of the brain to make this possible. So how can you implement it in your life? Discover and listen : This is called priming the brain for creativity, doing your work, and start getting more dots to connect. Incubate : In this period you have to take a step back from your work and try something different from your work. This phase may also be called the Newton phase, where ideas pop up in unexpected locations like under a tree or inside a bathtub. You may need to start actively acquiring new perspectives and different ways of looking at your problem. Illuminate: Here is when you start getting clicks of ideas and bits of deeply processed information directed from your subconscious. You need to gather these sparks and start painting a picture out of them. Verify: Sometimes the ideas you generate may lie in the superfluous domain, it's this time when you crush the paper and start fresh. But don't worry ; you have already created a platform. Today we live in a world where knowledge and connections are no longer asymmetric as it was in the past when only certain people had access to knowledge and connections. The accelerated growth of industries has one thing clear, it will replace a vast number of lower level (involving repetitive, monotonous and dangerous) human jobs. Thus creativity is the skill of the future and will always be. A fun fact is that creativity is very subjective; it's based on how you see the world based on your past experiences as a human.



## “Gemba Kaizen”,

**Pulkit Mathur, GET**, Anand Automotive (Gabriel India Ltd.), Pune  
**Dr. E. Vijayaragavan**, Co-ordinator Centre for Lean And Six Sigma (CLASS), SRM IST

Never say "it's impossible we can't make it!" Just think and do it. Kaizen means continuous improvement, a never ending journey that involves both managers as well as workers. This concept focuses on constant improvement efforts and working together for success. Gemba is real place where the action is performed and the facts can be found.

Gemba Kaizen is a human system that works only when it is people-centered. When everyone in an organization works toward one goal, there is a positive impact on cost-effectiveness, reducing machine downtime, improving productivity to lower cost, reducing lead time and improving Quality.

In Japan, if someone have to say “He is out at the line” they instead say “He is out at the Gemba”.

An excerpt taken from the book Gemba Kaizen by Masaaki Imai If we say “the customer is king”, we should say “the gemba is Buddha”.

Three ground rules for following Kaizen in Gemba 1) Housekeeping 2) Muda Elimination 3) Standardization

Eliminating MUDA at workplace shows high level of 5S discipline leads in greater standardization which indirectly helps in better QCD(Quality, Cost, Delivery). Good housekeeping reduces the failure rate by 50% and further standardization reduces by 50% in the new figure. So start working to eliminate MUDA and standardize things.

Kaizen helps people to not accept poor quality, to not make poor quality and to not pass on poor quality. Kaizen is a low risk, low cost approach which shows incremental progress over long run and helps to be and make better everyday. Kaizen is not a tool that anyone can take it and use. It is about a culture.

Genchi Genbutsu at Gemba collect Genjitsu; if any problem take temporary countermeasures on the spot, Practice 5S, eliminate Muda, do root cause analysis, standardize to prevent recurrence which helps in employing kaizen effort all the time inturn resulting in zero defects finally attaining customer satisfaction.



## “Hyperloop Technology”

**BEDADITYA BARAT**, IV Mechanical Engineering,

**Dr. E VIJAYARAGAVAN**, Co-ordinator Centre for Lean And Six Sigma (CLASS), SRM IST, Kattankulathur

A daily work management system is a set of standard practices that keep improvement efforts on track and moving forward. It is often referred to as the missing link in Lean initiatives and the key to long-term sustainment. A daily work management system is comprised of three elements, leadership routines, visual management, and accountability. Each of these three elements overlap, reflect and build off each other to keep leaders, at all levels, in touch with how things are going. How well are these three elements

woven into the fabric of your operational governance policy?

Leadership routines (aka leadership standard work) provides a structure to help leaders communicate clear and unambiguous statements of expectation. Routines (like Gemba Walks) can be instrumental to teaching and reinforcing lean thinking and practices. What’s important to remember is that there are leaders at every level, so what’s being communicated is a bottom-up and top-down process. It’s this daily work management rigor that drives a consistent PDCA routine and ensures resources are always focused on eliminating the most critical of the 7-wastes.

The second element is Visual Management. With good visual controls, everyone from process owners to presidents can see quickly how well things are going. Actual versus expected performance, upstream and downstream productivity, and any other metrics that help you understand where your business is at today. The form of your visuals is limited only by your imagination, i.e. quality boards, end of line boards, etc., the key is purpose and accessibility to all stakeholders.

The third element is Accountability. Accountability is a matter of commitment. It is shared responsibility. It connects all functions in an organisation for better performance. By developing suitable Managing points (Results) and Checking points (Process) for the accountability areas P,Q,C,D,S and M, the daily work Management can be implemented with good clarity on Roles and Responsibilities.

In the model suggested by Musk , the pressure of air inside the Hyperloop tube is about one-sixth pressure of the atmosphere on Mars. In Musk’s Model , The HYPERLOOP CAPSULE floats above the tube’s surface on a set of 28 air-bearing skis. Other versions use magnetic levitation rather than air skis to keep passenger pods above tracks. The pod would get an initial velocity from an external linear electric motor ( a round induction motor), then accelerate to 'high subsonic velocity' and then get a boost every 70 miles or so. Each capsule could carry 28 - 40 passengers plus some luggage; while other versions of the pods could carry cargo and vehicles. Musk suggested the usage of solar panels placed on the top of the tube to generate power in Hyperloop. Some critics of Hyperloop technology claim that travelling in the tube might be uncomfortable due to nausea-inducing acceleration, and lateral G-force on bends in route. Virgin Loop One, however, says that a journey via Hyperloop will be the same as riding an elevator .

Hyperloop technology is advantageous since it meets the prime objective of the entire world - less pollution, less expensive , faster and therefore economically beneficial. But despite having such advantages a billion dollar question still remains unanswered is whether this technology will be successful since it still has certain challenges to be faced like local economics, demography, geography. Capacity is a prime concern since a single capsule cannot carry more than 40 people at a time. There are now a number of companies working to turn this idea into reality. Among them are Virgin Hyperloop One, Arrivo, HTT, TransPod and others. Although it seems to be difficult, in the coming years it will surely be one of the prime transportation methods by curbing all its disadvantages.

## “Elements of a Daily Work Management System”

**C SUNDARAVADIVELU**, EC Member - NIQR Chennai Branch



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