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## FROM THE CHAIRMAN'S DESK



### “Reconnecting, Reviving, and Rising Together”

Dear Members & QCFI Family,

It is my Pleasure to reach out to you all through this edition of Udaan. We truly value your prolonged association with us. We aim to orient our communication and bring you fresh insights, updates, and developments from the world of quality and innovation. We are trying to keep pace with the chaining word.

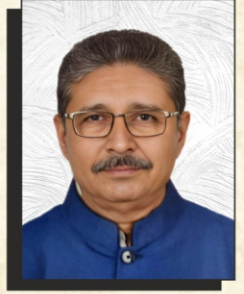
The Quality Circle Forum of India has always stood for people empowerment, teamwork, and continuous improvement. Our chapter has been conducting training sessions, workshops, competitions, and knowledge-sharing forums to help organizations adopt best practices. Through Quality Circles, Kaizen, Lean, Six Sigma, and 5S, employees are encouraged to take ownership of challenges, develop innovative solutions, and contribute directly to improving productivity and efficiency. These initiatives have led to cost savings, improved workplace harmony, and stronger employee engagement across several organizations.

As we move forward, it is important to align ourselves with the current industrial trends shaping the future of work. The emergence of Industry 5.0 is redefining the manufacturing landscape, where human creativity blends with technologies like AI, IoT, robotics, and data-driven systems. Alongside, sustainability and green manufacturing have become critical priorities as industries worldwide focus on reducing their environmental impact. QCFI is committed to helping members embrace these advancements and prepare for a future where innovation and quality go hand in hand.

Looking ahead, our goal is to make quality a culture rather than just a process. I encourage all members to continue sharing ideas, participating actively in our programs and driving innovation in their respective organizations. Together, we can set new benchmarks for excellence and competitiveness, ensuring that Indian industries thrive in the global arena.

**SUNIL DHOLAKIA**  
**CHAIRMAN**  
**VADODARA CHAPTER**

## FROM THE SECRETARY'S DESK



### **Greetings to Our Esteemed QCFI Vadodara Chapter Family Members,**

It is a proud privilege for me to address you as we continue our journey of fostering a culture of excellence. As the oldest chapter of the Quality Circle Forum of India, founded in November 1983, the QCFI Vadodara Chapter holds a special place as a pioneer in propagating quality concepts. Our legacy is built upon decades of dedication to assisting more than 200 organizations on their path to operational distinction.

For many years, we established a leading platform for foundational methodologies that have shaped our industries, including Quality Circles, 5S, Total Quality Management (TQM), and Kaizen. These principles remain the bedrock of our work. However, the world around us is in constant flux. We are now at the cusp of a new industrial era defined by collaboration, resilience, and sustainability.

At the heart of this transformation is a focus on people. The ethos of Quality Circles has always been about empowering individuals and fostering a sense of ownership, which directly aligns with the human-centric pillar of Industry 5.0. Through our recent Safety Convention, we reinforced that quality and safety are inextricably linked to boosting productivity and safeguarding our most valuable assets—our people. As we move forward, we must empower our people to take on higher-value roles, ensuring their creativity and innovation. Mind of people have to remain active for prompt application.

This new era presents a unique opportunity for our community to contribute to a larger national mission. By embracing Lean principles and eliminating waste, our member organizations are not just streamlining their operations; they are actively driving India's imperative for sustainable, green manufacturing. Our collective pursuit of efficiency, quality, and continuous improvement sets a new benchmark for corporate responsibility and helps forge a resilient future for our nation's economy and environment.

The strength of our forum lies in its collective spirit. Like a symphony that can only be played by a whole orchestra, our greatest achievements are realized when we work together. I invite each one of you to be a part of this collaborative journey. Let us continue to serve our profession with integrity and our society with purpose.

Together, we will continue to elevate standards, inspire innovation, and build a brighter future for all.

**HARESH MANKAR**  
**SECRETARY**  
**QUALITY CIRCLE FORUM OF INDIA,**  
**VADODARA CHAPTER**

# PLANNED OBSOLESCENCE AS A BUSINESS STRATEGY

## IMPACT ON QUALITY & ENVIRONMENT

**A K CHATTORAJ**

**CHAIRMAN (EMERITUS) QCFI VADODARA CHAPTER**

**FORMER VICE - PRESIDENT (HR) RELIANCE INDUSTRIES LTD.**

**DIRECTOR SPMF,**

**DIRECTOR LIFE LINE FOUNDATION**



The business is changing in a direction to promote over consumerism. This means excessive consumption of goods and services. Flood the market with goods and services and try to reach the consumers through multiple forms of advertisements. While some advertisements are soft and subtle, others are crude and blunt. This depends on the nature of consumers. The concept is simple. Create more and more need. If the need is not existing, create it. Find out the latent and hidden desires of the customers and fulfill that by specific products and services.

If the need is less, inject greed. Buy one and get two free. Consumers know well that business does not run on charity and nothing comes free, yet they run after the carrot dangled in front of them. Greed is a great driver of human mind. It had always been and it will continue to remain.

It is difficult for the business world to survive if the consumers minimize their needs. Poverty exists in our country and many other countries of the world even today. We have a poverty-centric mindset. The effort is to make it an abundance mindset. So, if the parents try to control the children about their expenditure, conflicts arise. The old generation believed to cut their coat according to the cloth, spend less if you earn less. New generation are controlled by the market trend. They believe that one needs to spend more and earn more. Overspending they feel will create a drive need to earn more. Thus, spend less if you earn less, is a forgotten philosophy.

Bharat that is India, is trying to come out of the poverty line. Yet we are a big market. The business world knows that they need to capture it. They are invading this market with cheap products which does not last long. They are changing fashion every third day to allure the customers. So, what if we are poor? Our maid servants have smart phones and they are busy talking while washing dishes. They are purchasing scooters and even cars by taking loans, and then getting into trouble.

To remain in debt was considered shameful and society looked down upon them. Now, the banks are alluring everybody to take loan and live a good life if one can pay back. The brighter side is that people can enjoy their prime youth while remaining indebted to banks. There is no stigma attached to it. But greed drives them to have more and more debt and they eventually get driven into the vicious cycle.

The availability of funds (be it in the form of debt) enhances purchase power which the business world needs. Then only the allurements to buy products work. When we buy products and services that works for a longer time, it creates a slogging market.

Planned obsolescence is a wonderful strategy to remain alive in the market. The watches, mobile phones, laptops and most of the products are not sustainable in terms of durability. Durability was considered as an important ingredient of quality. I am afraid it is not so now.

Business world tries to create dependence of customers on their products and services. The effort is to tie a knot with the customers with their products. The consumers are continuously allured and at times enticed to buy new products. Popular products are continuously re-designed in the name of continuous improvement and innovation without much value addition. Simple products are made complicated.

With the advent of AI, redesigning the products with some innovation has become simple. Value addition by way of AI intervention becomes easily visible and attractive. The new minds get attracted quickly.

The products are re-engineered in a manner that it will tend to get obsolete in four to five years. Thus, the consumers will be lured to buy new products, because the old product does not work properly either due to software up-dation or due to lack of availability of spare parts.

Cosmetic additions superimpose the purpose of the product and services. Some companies design the product in such a way that some of their product components are governed by their passwords which are not shared. This results into the fact that these components cannot be repaired by any other company. Now, when you reach the company, it says that these components are not available in the market, you will have to wait and they offer you new product. The concept of repairing products have become obsolete; it is also expensive and time consuming. Use and throw is the new normal order of the day. If one cannot throw, he will collect trash.

Even three decades back, the durability of the product was considered to be a quality determinant. I remember, my father was given a wrist watch at the time of his marriage which he used for his entire life and we had to remove it only after his death. Now coming to wrist watches, the primary purpose of the same is to see the time and date. Other things are added due to which the cost component goes much higher. There has to be the cost of battery and charger and the battery & charger eventually do not work. It happens in the process, that the purpose of the watch of watching the time gets into oblivion and people are distracted by other features, the value addition of which is questionable.

Similarly, most of the products and services are planned for quicker obsolescence so that new product/service can be pumped in the market and flooded. The companies ensure that continuous advertisement goes on so that people will feel that they are being updated with the changing world. In many cases, buying a new product whether it is a car or a motorbike or a household item becomes a status symbol. The new gen considers that the mobile use is reflective of their updated status.

Long back, a contractor who made roads had shared me in private that they intentionally make the roads of poor-quality standards to create recurring contracts. Even the Engineer's in-charge of the job supported them for unethical reasons.

The recent collapse of a bridge near Baroda (and many others elsewhere) is a crude reminder to all citizens that quality work in terms of durability is important. People loose life, connectivity gets disrupted, some officers suspended and a committee is constituted to investigate. Media becomes active and vocal for the TRP, politics creep in, wild promises made and then people forget over a period of time. Then another bridge collapses and the old sequence is repeated. But then, Howrah Bridge stands today with glory for years, signifying that quality leads to sustainability and, it matters.

So ultimately, the business strategy drives consumers to shoulder the burden of frequent replacement and added costs. This leads to wasteful expenditure of the customers. Consumers lose the trust on product durability. They feel helpless in such situations. The growing concern is about sustainability of the product and services. The mind set of people are now being altered by the business houses by flooding products in the market ensuring less durability. Repairs of the products are now being considered as an unnecessary embarrassment made by the customers and the service level has gone to a deplorable low level.

People talk of innovation and that innovations must continuously happen. There is no dispute in that. The concern is what is the cost of these innovations siphoned from the pocket of customers. From the environment point of view, rapidly discarded products are generating enormous wastes. These wastes are causing concern to environmentalists.

The recent concept '**Daam kam-dam jyada**' challenges the planned obsolescence as a business strategy. If everything in the world changes fast, this business strategy also must change. Consumers must not be duped by created cravings. Ventures on experimentation ultimately come from the customers pocket, however, shallow or deep the pocket may be. Business must flourish with ethics and fairness and should consider intellectual honesty in business decisions, to create a culture of trust. Business survive only if humanity survives.

# QUALITY PEOPLE AND QUALITY-DRIVEN PROCESSES: IMPORTANCE OF QUALITY, IN A CIRCULAR AND SUSTAINABILITY FOCUSED MANUFACTURING AND MARKETING

## SUSHIL KUMAR SHARMA

Vice Chairman, QCFI Vadodara

Certified Senior Business Excellence Assessor

Certified Energy Auditor, Certified Sustainability Assessor

Chief Sustainability Officer, Dubai Institute of People, Dubai

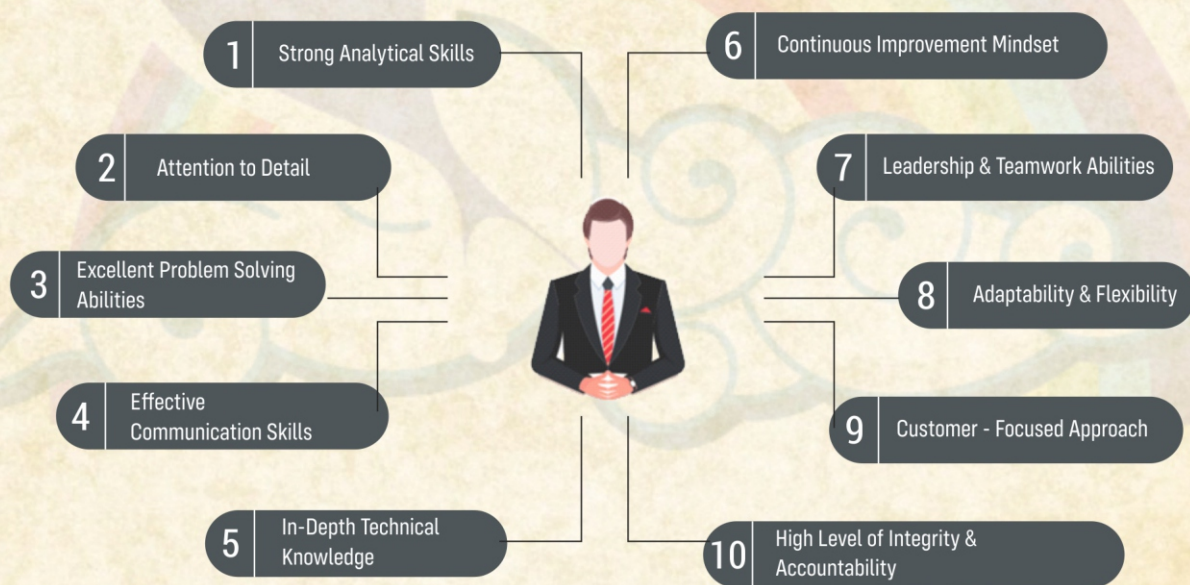
Former General Manager, Corporate Sustainable Development, NTPC Limited



Globally respected and preferred Indian renowned quality brands, known quality practitioners, such as Tata, Infosys, Wipro, Mahindra, HCL, Godrej, Dabur and Amul are further gaining international recognition for trust, quality, innovation, sustainability. These brands succeed by delivering reliable products and services, investing in R&D, change management, continual learning, adhering to ESG and global standards, and adapting offerings to regional markets. Their strong global presence across sectors—from IT and automotive to consumer goods and wellness—demonstrates India's growing capability to produce high-value, globally competitive brands. Strengthening these factors further supports India's Make in India cum Made for the World ambitions.

**Quality as a Strategic Differentiator:** In India's push for Make in India and global exports, quality is a key differentiator. Products must compete not just on cost but on reliability, durability, and compliance with international standards. Adherence to certifications like ISO, CE, and RoHS builds trust and strengthens India's brand equity. Embedding sustainable quality also ensures compliance with ESG norms, enabling access to strict global markets such as the EU, US, and Japan.

**Role of a Quality Person:** Skilled quality professionals are central to embedding quality across design, manufacturing, logistics, and after-sales. As change agents, they ensure compliance with



- Head/Brain: Systems thinking. Root cause analysis. Data-led (SPC, Pareto, Design of Experiments).
- Eyes & Ears: Customer Points of View. Listening to Voice of Customers /Voice of People.
- Mouth: Clear, respectful communications. Escalate early.
- Heart: Integrity. Ethics. Safety-first.
- Spine: Standards/Standards of Operating Procedures. Document. Traceability.
- Right Hand: Process control. Corrective and Preventive Actions. Poka-yoke.
- Left Hand: Plan-Do-Check-Act. A3. 5-Why.
- Feet: Gemba. Kaizen.
- Toolkit (Bag): Failure Mode and Effects Analysis. Control plans. Measurement System Analysis. Audits, Assessments.
- Shield: Risk management. Prevention > detection.
- Metrics: Right-first time (RFT). Cost of Quality. Critical to Quality /Key Performance Indicators.

global standards and sustainability benchmarks. Strong quality leadership drives continuous improvement, defect prevention, and customer-centric innovation, positioning India as a high-value, globally competitive exporter.

**Quality-Driven Processes & Practices:** Adopting methodologies like lean manufacturing, Six Sigma, Kaizen, and Total Quality Management ensures operational consistency, efficiency, and waste reduction. Integrating sustainability metrics—energy, water, recyclability, and carbon footprint—reinforces environmental responsibility. Digital tools like IoT & AI-based monitoring enable real-time quality checks, predictive maintenance & traceability, critical for India's enhanced competitiveness in global supply chains.

**Strategic Implications for Make in India & Made for the World:**

Robust quality processes enhance yield, reduce defects, and build capabilities to meet global standards domestically. For global exports, high-quality and sustainably produced goods increase market acceptance, boost India's reputation, reduce product rejections, and strengthen competitiveness. ESG-aligned quality further positions India as a responsible and reliable manufacturer on the world stage.

**Quality in the Indian Context**

**Quality as a Strategic Differentiator**

In India's push for Make in India, a key operational quality is a key differentiator. Quality as a core differentiator in the push to strategic differentiation. Skilled quality professionals play a critical role across design, manufacturing, logistics, and after-sales.

**Role of a Quality Person (Quality Champions)**

Skilled quality professionals are central to quality across design, manufacturing, logistics, and after-sales. Strong quality leadership drives continuous improvement, defect prevention, and customer-centric innovation, positioning India as a high-value, globally competitive exporter.

**Quality-Driven Processes & Practices**

Robust quality processes enhance yield, reduce defects, and build capabilities to meet global standards. High-quality sustainability produced goods improve market acceptance, boosting reputation, reducing product rejections, and strengthening competitiveness.

**Key Takeaways**

Quality has evolved from an operational to a strategic imperative, tied to brand, sustainability, and market access. Achieving Make in India cum Made for the World objectives requires investing in skilled people, effective processes, and quality-driven systems. India's global competitiveness depends on fostering a proactive quality culture, leveraging digital tools.

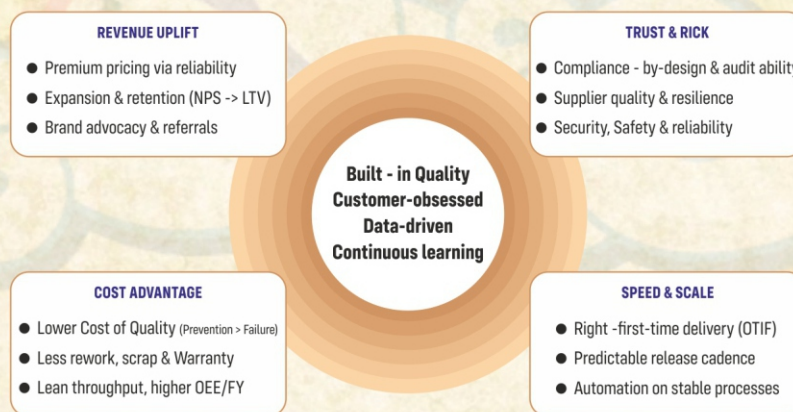
**Strategic Implications for Make in India & Made for the World**

Quality has transitioned from an operational concern to a strategic imperative, and market access. Achieving the objectives of Make in India cum Made for the World objectives requires investing in skilled people, effective processes, and quality-driven systems. India's global competitiveness depends on fostering a proactive quality culture, leveraging digital tools.

Global exports, high-quality and sustainably produced goods increase market acceptance, boost India's reputation, reduce product rejections, and strengthen competitiveness. ESG-aligned quality further positions India as a responsible and reliable manufacturer on the world stage.

**Quality as a Strategic Differentiator:** In today's globalized and sustainability-focused market, quality has become a strategic differentiator. Products compete not only on cost but on reliability, durability and compliance with international standards. For initiatives like Made in India, adherence to certifications such as ISO, CE and RoHS builds customer trust and strengthens brand equity. Furthermore, embedding sustainable quality ensures compliance with environmental norms, enabling access to markets with strict ESG requirements, including the EU, US and Japan.

FROM COMPLIANCE COST ----> ENDURING ADVANTAGE



**Key Takeaways:** Quality has transitioned from an operational task to a strategic imperative tied to brand, sustainability & market access. Achieving **Make in India cum Made for the World** goals requires investing in skilled people, effective processes & quality-driven systems. India's global competitiveness depends on fostering a proactive quality culture, leveraging digital tools and embedding sustainability-focused standards at every stage.

**Summary:** For India's Make in India cum Made for the World ambitions, **quality** is a strategic differentiator that goes beyond cost, encompassing reliability, global certifications and ESG compliance to enable market access. Skilled quality professionals embed standards across design, manufacturing, logistics and after-sales, driving continuous improvement and customer-focused innovation. Quality-driven processes—lean manufacturing, Six Sigma, Kaizen, TQM—combined with sustainability metrics and digital tools, ensure consistency, efficiency and traceability across supply chains. Together, these capabilities will enhance domestic manufacturing, support global competitiveness, strengthen India's brand and position the practicing organizations / companies as a responsible highly valued.



**PARESH C. SHAH**  
**Governing Council Member**  
**Vadodara Chapter**

The production and manufacture of products can be said to be as old as mankind himself. Even before we began manufacturing products for commercial purposes, people used to produce simple objects for home and personal use. For example, goods such as weapons, clothing, shelter and food were all produced by hand. And these basic manufacturing processes were done in small warehouses using simple tools and equipment.

However, great advancements have now been made in the production industry; new technologies have been introduced in the modern industry, leading to a significant change in how the manufacturing processes are carried out. Due to these developments, we are now able to produce items on a large scale and for commercial purposes. This process of change (or transition) from a handicraft economy to a manufacturing industry that uses machines and new technologies is what is referred to as the **Industrial Revolution**

Here is summary of industry 1.0 to 4.0:

	<b>INDUSTRY 1.0</b>	<b>INDUSTRY 2.0</b>	<b>INDUSTRY 3.0</b>	<b>INDUSTRY 4.0</b>
<b>Source of Power</b>	Water and steam were the main power sources for machines and industrial processes.	Electricity and oil were the main source of power for most machines and industrial processes.	Most production processes are automated using information technology and logic processors. They are using Electricity as source of Power.	Most production processes use huge quantities of data and smart & interconnected machines that uses Electricity as main source of Power. Emphasize on Green Technology/Power
<b>Labour</b>	More labour force and human resources were required for most industrial processes – This is because there was more demand than supply, which meant more people being employed and working for lengthy hours.	Less labour force was required, and more people lost their jobs – This is because machines replaced workers, carrying out most of the activities that these would undertake.	Most production processes are automated using information technology and logic processors. However, they rely on some human intervention.	Most production processes use huge quantities of data and smart & interconnected machines that do not rely on any human intervention. Need of different skill set of employees.

## The Fourth Industrial Revolution: Industry 4.0

Industry 4.0 is the industrial revolution being used in our modern world. As a development of the Third Industrial Revolution, this era is characterized by the use of communication & smart information technologies in various industries. The initial developments of Industry 4.0 began in the 1990s, following the advancements in the telecommunication and internet industry. However, the major changes in this era were noticeable from 2011.

Therefore, the fourth industrial revolution has led to efficient networking (or interconnectivity) of systems, also known as the “cyber-physical production systems.” In turn, this invention has led to the development of [smart manufacturing](#) and factories, where all production is almost completely automated production systems, people and components communicate thanks to a unique network. It allows a more efficient way of working by pulling individuals into smarter networks. The manufacturing industry is almost entirely digitalized, making it easier to pass information to the right people at the right time.

The industrial revolution 4.0 is considered the era of production facilities, storage systems and smart machines that can trigger actions, control other devices and exchange information autonomously without any human intervention. This ideal distribution of information is made possible through the IIoT (Industrial Internet of Things). The IIoT has four key elements, namely:

[Cloud computing](#) and big data

- Cyber-physical systems
- Machine learning and artificial intelligence
- The Internet of Things (IoT)

Another important aspect of the fourth industrial revolution is the increased attention to [sustainability](#) and environmental issues. Sustainable development, as defined by the [three pillars of sustainability](#) ([environmental](#), economic and [social sustainability](#)) is not only seen as a necessity to be more eco-friendly and conserve natural resources for future generations, but it is also an opportunity to improve the efficiency of manufacturing processes and improve business profitability.

### The Fifth Industrial Revolution: Industry 5.0

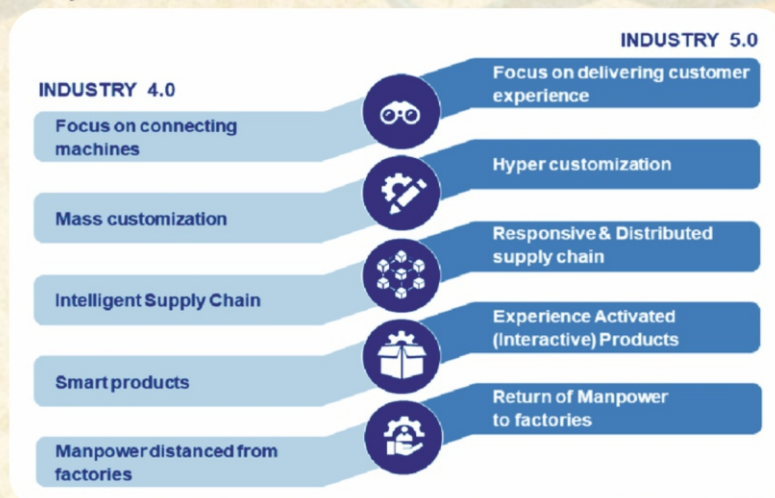
Still, more and more advancements are expected to be made and new Industry 4.0 examples are coming up by the day, there is the potential to develop smart machines with the ability to trigger self-organized logistics, predict failures and carry out different maintenance processes autonomously. These machines will be able to predict unexpected or abrupt changes in production, hence ensuring continual success in the manufacturing processes. In other words, we can expect a drastic change in how goods are manufactured, serviced, refined and distributed.

While companies and whole industries are still in the middle of this fourth revolution, the next revolution is already well on its way Industry 5.0. Before you panic and try to make hasty decisions, let's have a quick run-through. What does it Industry 5.0 mean and what are its implications for your current and future business strategy?

The concept of Industry 5.0 is a relatively new one. According to the [European Union](#) Industry 5.0 “provides a vision of industry that aims beyond efficiency and productivity as the sole goals, and reinforces the role and the contribution of industry to society.” and “It places the wellbeing of the worker at the centre of the production process and uses new technologies to provide prosperity beyond jobs and growth while respecting the production limits of the planet.” It complements the Industry 4.0 approach by “specifically putting research and innovation at the service of the transition to a *sustainable, human-centric and resilient European industry*”

In other words, at its heart, Industry 5.0 reflects a shift from a focus on economic value to a focus on societal value, and a shift in focus from welfare to wellbeing.

Quick Comparisons between Industry 4.0 & 5.0 are:



### Conclusion

Technological innovations are becoming even more rapid day by day. It is expected more innovations over the next decade and many more years after. In the meantime, the development of factory robots and artificial intelligence will lead to more meaningful interactions between humans, computers and robots, in turn resulting in better production processes, better living standards and increased sustainability.

## TWO-DAY PROGRAM ON DIGITAL TRANSFORMATION ON 21<sup>ST</sup> AND 22<sup>ND</sup> AUGUST 2025 AT SURYA PALACE.

We conducted a **two-day program on Digital Transformation on 21<sup>st</sup> and 22<sup>nd</sup> August 2025 at Surya Palace**. It was an emerging topic when Artificial Intelligence is invading the world aggressively. It was challenging for us as this was the first time we thought of conducting such a program with distinguished faculties from Bangalore. We received overwhelming response from the business organizations around. Participants came from Kutch, Sanjan near Silvassa and Mumbai.

### The main topics covered during the two day program were:

- Understanding of Digitalization & Digital transformation with business models of digital natives as examples and key components of digital platforms.
- Conceptual understanding of AI (Supervised & Unsupervised learning) and other digital Technology groups like - SMAC (Social, Mobile, Analytics, Cloud), Augmented Reality/Virtual Reality, Digital Twins, IoT, Blockchain & Metaverse.
- Real world industry applications of AI in various industries like Manufacturing, Insurance, Automotive (Audi) etc. Some videos were also shown to ensure participants get an understanding of how digitalization is transforming businesses across the world.
- A case study discussion was conducted on Digital Transformation for a Food & Beverage manufacturing company.
- Overview of Customer centricity & journey map, value chain fragmentation and AI ethics & cybersecurity risks.
- Detailed conceptual learning on Generative AI, AI Agents, Agentic AI (Multi agent ecosystems)
- Step by Step approach to carry out a digital transformation program and transformation framework.
- This was followed by a group exercise where participants were divided into groups and they came up with Ideas and approach to implement digital transformation to drive value (via bottom line or top line improvements) applying all concepts learnt in the two-day program.
- The level of interaction from the participants from your organization was extremely good. All participants actively listened, were engaged in conversations, were asking questions and showed the right levels of learner mindset & drive to improve. They also did very well in the group exercise & case study discussion.

After the program, we believe the participants got awareness and knowledge of digital technologies and a good conceptual understanding of AI (Machine learning & Generative AI). We believe they also got to see the latest advancements in the technology environment with a global context and how other organizations of the world are transforming their businesses leveraging digital capabilities.

After seeing their engagement in case study and group exercise, we believe participants will be able to spot areas within your organization where digital initiatives can drive value and improve competitiveness and use a structured approach to conceptualize and plan digital transformation projects.

We believe awareness of **'what is possible through digital interventions'** is the first step to be able to come up with ideas & reimagine how the organization or the specific department/function can take up digital initiatives to be competitive and relevant for the future.



# GLIMPSES OF CONVENTION ON KAIZEN/7 MUDA, TQM & TPM ON 20<sup>TH</sup> JUNE 2025

QCFI, Vadodara Chapter organized the Convention on Kaizen/7 MUDA, TQM & TPM on 20<sup>th</sup> June 2025 at Hotel Grand Mercure Surya Palace – Vadodara.

The program was graced by

Mr. Raghavendra Naik - Global Head- Manufacturing Excellence PGP Glass Pvt. Ltd, Kosamba,

Mr. Sameer Sahai – CGM Projects – IOCL Vadodara.

Mr. Neeraj Tyagi – A-1 Fence Products Company Pvt. Ltd.

A special Presentation presented by Viroc Hospital on TQM Approach a Case Study, which was highly appreciated by everyone.

In the afternoon there was a Panel Discussion on the subject Application of AI in Preventive Maintenance.

The Convention was attended by Total 84 Teams with 315 Participants from 40 industries from Gujarat and outside Gujarat.

All the teams were awarded with the trophies & Certificates. The program ended with the vote of thanks by

Mr. Haresh Mankar, Secretary, QCFI, Vadodara and National Anthem.

## PIC'S SPEAK





## REACHING OUT.

From last couple of months, we are trying to reach our associate industries by meeting and talking to them. Propagation of Quality concepts in the organizations is our prime objective. Quality initiatives many a times does not sustain for many reasons which include, change of management priorities, absence of a key driver who champion the cause, lack of support from the line management and many others. Unless any initiative taken is continued for a long time, it does not yield results. Quality initiatives are not a 100-meter sprint, it is a marathon.

We find from our records that sometimes, organizations do not connect us on their own. We find, that when we approach them, they respond. Most of the times meeting them at their place gives us lot of satisfaction. We see how industries are growing on their strengths and how resilient they are. Most organizations' welcome us and spend time with us.

We visited the following industries in the recent past, Willowood Dahej, NACL Dahej, Suzlon and Polycab Daman, Western at Sanjan, Emami and Reliance in Silvassa etc.

At Baroda we met IOCL, Deepak Nitrite, GSFC, GAIL, Rotex and many others.

We will try to strengthen our connect with all organizations around.

**By Prabha Vyas  
CEO**

## **A Refresher Session on QC by QCFI Vadodara Chapter was conducted at Reliance Industries Ltd. - Silvassa by Mr. A. K. Chatteraj & Ms. Prabha Vyas on 18th August 2025**



# THE FORGOTTEN ESSENCE OF SIX SIGMA: A LEGACY LOST IN BUZZWORDS

## BY AMEY PRAKASH TATTU (SIX SIGMA MASTER BLACK BELT)



Decades ago, the corporate world was introduced to a transformative philosophy—**Six Sigma**. Born from the vision and work of pioneers like **Dr. Mikel J. Harry**, **Bill Smith** and **Bob Galvin**, Six Sigma promised nothing short of operational excellence. It wasn't just a methodology; it was a movement—an evolution in how businesses approached quality, efficiency, and customer satisfaction.

But time, as it often does, has taken its toll.

Today, Six Sigma has become something it was never meant to be: a **buzzword**. Ironically, although the term has been around long enough to outgrow the 'buzzword' label, in practice, that's all it often remains—a shiny, overused term stripped of its original depth and intent.

### From Masters to Marketers

There was a time when Six Sigma consultants and trainers were seen as **coaches** or even **gurus**—individuals who carried the torch of a powerful ideology and helped organizations unlock their true potential. Sadly, many of them have now become mere **salesmen**. The wisdom that once defined the philosophy has been replaced by PowerPoint pitches and standardized templates. Instead of *coaching for excellence*, the focus has shifted to *selling certifications*.

The essence of Six Sigma, once deeply rooted in problem-solving, process understanding, and continuous improvement, is now diluted. It has become more about selling a product than teaching a principle. The tools and jargon are still there, but the *Jagran* (awakening or awareness) is missing. In many cases, it's become "*Jargon without Jagran*." **The Myth of "Not for Us"**

Perhaps the most dangerous development is the proliferation of myths around Six Sigma's applicability.

**For example**, a very senior executive from a reputed multinational organization once claimed, "Six Sigma is not meant for us. We are a project-based industry where one product takes months to complete. Quality improvement through Six Sigma is not our food."

This is a **classic and deeply flawed misunderstanding**.

The belief that Six Sigma is only about reducing product defects—and only applies to mass production—is one of the highest-level myths surrounding the methodology. In reality, **Six Sigma is industry-agnostic**. Whether you are in **projects, chemicals, automobile, FMCG, FMEG, banking, BPO/KPO, IT, or services**, Six Sigma principles can be applied effectively.

The key lies in redefining the very concept of a *defect*.

A defect is **not limited to product flaws**. A defect is **any deviation from a defined requirement**—be it in **lead time, cost, delivery process, service handling, safety, employee satisfaction, employee retention or even customer interaction**. If something strays from what was expected, that's a defect. And where there is a defect, there is an opportunity for improvement.

### Start with Recognize, R-DMAIC

As **Dr. Mikel Harry** emphasized, Six Sigma must begin with **recognize**—a phase dedicated to deeply understanding the real needs of the organization and identifying where Six Sigma can genuinely add value. It is not about templated deployment. It is about **exploration, discovery, and alignment**. Unfortunately, many organizations skip this step. Internal stakeholders, often swayed by trends or previous affiliations, begin implementing concepts like TPM, LEAN, TQM, Six Sigma—or worse, rejecting it—without fully understanding their own operational context. They resist integrating these methodologies, falsely believing these are incompatible with their industry.

This rigid mindset is not just incorrect—it's a barrier to progress.

### Time for a Reawakening

What's needed today is not more buzz, but more **awareness**. Not just Jargon for the sake of sounding smart, but **Jargon with Jagran** jargon backed by genuine knowledge and contextual application. If we are to honour the legacy of Dr. Mikel J. Harry, Bill Smith and Bob Galvin, we must return to the core of what Six Sigma stood for. We must stop treating methodologies like commercial products and start treating them as the powerful philosophies they are. Only then can we reignite their true potential. The journey to operational excellence is not about which method you follow, but how deeply you understand the "why" behind it.

## GLIMPSES OF SAFETY CONVENTION

QCFI, Vadodara Chapter organized the Safety Convention on 26<sup>th</sup> April, 2025 at Surya Palace. The program was graced by President QCFI Mr. Avinash Mishra as Guest of Honour, Executive Director QCFI Mr. D.K. Srivastava as Guest of Honour, Vice President QCFI Mr. G.P. Singh as Keynote Speaker and Director QCFI Mr. Rituraj Mehta as Keynote Speaker.

Ms. Prabha Vyas, Chairperson, QCFI, Vadodara Chapter welcomed all the dignitaries and felicitated them. Mr. Sunil Dholakia, Mr. Dinesh Jain, Mr. Sushilkumar Sharma and entire G. C. of Vadodara Chapter were present.

The program was attended by 110 participants from various industries from Gujarat and outside Gujarat.

Mr. Rituraj well explained the Safety in a witty manner which was very well appreciated by the participants.

Mr. G.P. Singh introduced and explained the concept of "Safety Circle" to the participants which was very well taken by them. Many organizations have shown their interest in propagating the concept.

Mr. Avinash Mishra and Mr. D.K. Srivastava addressed the participants.

QCFI, Vadodara felicitated 2 women and on this occasion.

QCFI, Vadodara also awarded life time achievement Award to Mr. A.K. Chattoraj (Chairman Emeritus)

- (1) Ms. Anjali Marathe, one of our Life Members for receiving "Sahitya Paritoshik"
- (2) Ms. Garima Malvankar for achieving Youth Icon Award.

Mr. D. K. Srivastava declared the eligibility of all the teams to offshore NCQC to be held at Dubai.

All the teams were awarded with the trophies & certificates. The program ended with the vote of thanks by Mr. Haresh Mankar, Secretary, QCFI, Vadodara and National Anthem.



# COST OF QUALITY VS PROFITABILITY

## A STRATEGIC LENS FOR PROCESS AND ENGINEERING INDUSTRIES



**JALENDU SHAH**

Member, Quality Circle Forum of India

In today's competitive industrial landscape, **Profitability** is no longer a function of production volume alone—it is intricately tied to the **Quality** of output and the efficiency of processes. For process and engineering industries, where precision, compliance, and consistency are paramount, understanding the **Cost of Quality (CoQ)** and its counterpart, **Cost of Poor Quality (CoPQ)**, is essential for sustainable profitability.

In the words of W. Edwards Deming, "Quality is everyone's responsibility." And in today's industrial economy, it is also everyone's opportunity—to drive excellence, efficiency, and enduring customer delight.

The waste management of QC samples is an underexplored subject even by big QC Gurus. How serious it is? Let us evaluate some scenario. A pharmaceutical Lab conducting experiments on rabbits, monkeys and other animals. When they die, the cost of disposal is phenomenal. With increased sampling, where it will touch? A virus lab like Wuhan can create catastrophic situation, if sample wastes are not dealt properly. Same can be the scene with all industries with their perspective effects.

I believe that Quality brings customer delight and Profit. But over sampling or QC compliances is a process failure. Should it be the case in your industry? NO

### Understanding CoQ and CoPQ

**Cost of Quality (CoQ)** encompasses all costs incurred to ensure that products meet quality standards. It includes:

- **Prevention Costs:** Training, process control, and quality planning.
- **Appraisal Costs:** Inspection, testing, and sampling.
- **Internal Failure Costs:** Scrap, rework, and downtime.
- **External Failure Costs:** Warranty claims, returns, and customer dissatisfaction.

**Cost of Poor Quality (CoPQ)** refers to the losses incurred when products fail to meet quality standards—often hidden in operational inefficiencies, customer complaints, and regulatory penalties. Studies suggest that CoPQ can account for **15–25% of total sales** in manufacturing sectors, with significant impact on bottom-line profitability.

### Time & Cost of Sampling: The Hidden Drain

Sampling is a cornerstone of quality assurance, but excessive or inefficient sampling can become a silent profit killer:

Criteria	Consequences
<b>Increased Sampling Frequency</b>	While it may reduce risk, it inflates appraisal costs and consumes valuable production time
<b>Sample Waste Management</b>	Disposing of test samples, especially in chemical or metallurgical industries, adds to environmental and compliance costs
<b>Waiting Time</b>	Delays in sampling and testing can disrupt production flow, leading to missed target lines and compromised final product quality

For instance, in a petrochemical plant, increasing sampling frequency from 2 to 6 times per batch may lead to a **12% rise in operational cost**, with negligible improvement in defect detection. The excess sampling also delayed batch release by 4 hours, plant's capacity utilization, delayed dispatches, increased samples related waste and affecting downstream logistics.

# PROFITABILITY IMPACT: A QUANTITATIVE PERSPECTIVE

## Let's consider a mid-sized valve manufacturing unit:

- Monthly production: 10,000 units
- CoQ: ₹12 lakhs (including ₹4 lakhs in sampling and inspection)
- CoPQ: ₹8 lakhs (due to rework, scrap, and customer returns)

By optimizing sampling protocols and investing in inline inspection technology, the unit reduced appraisal costs by ₹2 lakhs and internal failure costs by ₹3 lakhs—resulting in a **42% improvement in net profit margin** over three quarters.

Metric	Before Optimization	After Optimization	Improvement
Monthly CoQ	₹12 lakhs	₹10 lakhs	↓ ₹2 lakhs
Monthly CoPQ	₹8 lakhs	₹5 lakhs	↓ ₹3 lakhs
Net Profit Margin	18%	25.6%	↑ 42%

## Customer Delight: The Ultimate Quality Dividend

Quality isn't just about defect-free products—it's about delivering consistent value. Meeting target lines and minimizing delays enhances customer trust and satisfaction. In engineering industries, where clients often operate on tight project timelines, reliability becomes a competitive differentiator.

## Scientific Approaches to Mitigate Losses

To reduce CoPQ and enhance profitability, industries must shift from reactive to proactive quality management:

Method	Benefit
Statistical Process Control (SPC)	Early detection of deviations
Design of Experiments (DoE)	Optimized process parameters
Root Cause Analysis (RCA)	Systemic issue resolution
Digital Twin & AI	Predictive quality simulation
Lean Six Sigma	Waste elimination & process control

## Technology Adoption: The Profitability Catalyst

Modern technologies offer transformative potential:

- **Inline sensors and IoT:** Enable real-time quality monitoring.
- **Machine learning algorithms:** Predict failures and optimize maintenance.
- **Automated sampling systems:** Reduce human error and sampling waste.

For example, a steel pipe manufacturer implemented laser-based inline inspection, reducing manual sampling by 70% and cutting appraisal costs by ₹1.5 lakhs/month.

## Conclusion: Quality as a Profit Center

Quality should not be viewed as a cost burden—it is a strategic investment. By understanding and managing CoQ and CoPQ, process and engineering industries can unlock significant profitability gains. The key lies in balancing prevention and appraisal with smart technology and scientific rigor.

## Details of Training Program held from April 2025 to July 2025

<b>Training Programme Topics</b>	<b>Organization</b>	<b>Date</b>
Training Program on Quality Circle	NACL Industries Ltd - Srikakulam	02/04/2025 04/04/2025
QC Initiatives	NACL Industries Ltd - Dahej	29/05/2025
Training Program on Kaizen	Mother Dairy - Junaghdh	17/06/2025 18/06/2025
Hand Holding Program on Five-S	A1 Fence Products Company Pvt. Ltd. - Sanjan	04/06/2025
Hand Holding Program on QC	A1 Fence Products Company Pvt. Ltd. - Sanjan	03/06/2025
Lecture on Kaizen	Sun Pharmaceutical Industries Ltd. - Vadodara	23/07/2025
Training Program on TPM	Polycab India Limited - Daman	12/07/2025
Internal QC Competition	Sun Pharmaceutical Industries Ltd. - Panoli	02/07/2025

### Our Contribution as External Evaluators

Jury at Internal QC Competition	Sun Pharmaceutical Industries Ltd. - Vadodara	26/06/2025 27/06/2025
Internal QC Competition	Sun Pharmaceutical Industries Ltd. - Dahej	17/06/2025
Internal QC Competition	Sun Pharmaceutical Industries Ltd. - Dewas	13/06/2025 14/06/2025