Dronacharya Award Acceptance

15th Annual Conference, Indian Society for Quality, New Delhi

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Our Chief Guest Mr Kiran Karnik, President Mr Kiran Deshmukh, Mr Janak Mehta, friends and distinguished delegates,

I am profoundly honoured by this decision of the Indian Society for Quality to present me its Dronacharya Award. I feel humble, knowing that my contributions have been but feeble, especially in comparison to those before me. I am deeply grateful to Mr Kiran Deshmukh, President, to Mr Janak Mehta, Founder and past president, and to Mr Anil Sachdev, Mr J. Ravikant, Mr. Ram Mohan and other members of the Governing Council for considering me worthy of such a prestigious award.

One look at the illustrious names of those who have so far been honoured with the Dronacharya award will make my alarm clear - Dr Kume, Prof. Tsuda, Prof. Washio, Dr Shiba and Dr Kano! I make no claims to matching up with any of these giants in the field of quality.

As an aside, I would like to touch upon aspects relating to the word *drona*. In Sanskrit, *Drona* meant a wooden vessel, presumably one in which the Vedic drink that produced hallucinations – *soma* – was made or served. Dronacharya is said to have been born off a *drona*, a wooden vessel, and thus he is *ayonisambhava*. Some historians hold that his name as well as his proficiency with the bow are suggestive of the autochthonous, that is, *adivasi* element in the *Mahabharata*. An acharya is of course one who who walks the noble path, rather than just expound it.

Thus, the ISQ Award is named after that great teacher of archery. The recipient is thought of as a worthy teacher, even if not quite a Dronacharya. It is indeed a high standard for any one to try living up to.

I would like to dedicate this award to my guide and teacher for over two decades, Dr Hitoshi Kume. It was sometime in 1990 that I read his book *Statistical Methods for Quality Improvement*, which I pinched from my friend and colleague, Mr P.P.R. Rao. Little did I know then that I would meet Dr Kume in person. The first time was in November 1995, when he visited SRF. I would forever like to be considered his student and follower. Dr Kume is a man of few words. One has to make an effort to understand the deep meaning of what he utters. I suppose that is the way of most Gurus. He also has a sense of humour, a child-like laugh, and respect for his own colleagues in the profession and to everyone in general. I have had the privilege of not only attending innumerable counselling sessions and classes of his, but also teaching alongside him. I also had the privilege of editing and doing a bit of proof-reading of his two books published in India – *Management by Quality 2nd edition*, for which I wrote *The SRF Story* – and *Quality Management in New Product Development*. Our relationship has blossomed over time into a family friendship. Working with him has held me close to fundamentals and first principles, and taught me to be patient but steadfast with what has to be said or done.

Before all this happened, my first exposure to TQC (as TQM was still called in Japan) was in 1987 when I joined the joint venture SRF Nippondenso at Surajpur near Delhi, as its head. Together with Toyota Production System (called Total Industrial Engineering in Denso) and Productive Maintenance, they formed a formidable triad and a clear breakthrough in the technology of management. Slowly, I realized that what I was witnessing was no small adjustment, it was a clean revolution in thought and action. Unknown to me, my TQM journey had begun. This period coincided with CII starting its TQM Division under the leadership of Mr Janak Mehta, who had previously led the famous Nashik Experiment, which he had been instrumental in conceiving and executing, and which constituted India's first brush with TQM. QC circles had been introduced by 1980 in the name of Quality Circles, which phrase India picked up from the U.S., but these were then conducted in a non-TQM environment.

At the CII TQM Division, I attended a few of the monthly meetings of CEOs that were chaired with skill and commitment by Dr V. Krishnamurthy who took a keen interest in the advancement of TQM knowledge. CII also organized an annual two-week mission to JUSE in Japan to learn TQM from Japanese masters and also to visit a few companies. Many of the companies represented in these missions went on to win the Deming Prize. I was part of the 1991 mission and was quite convinced by then that this had not only to be the chosen path for Indian companies, but for me my vocation.

These developments led to my spearheading the TQM effort of SRF businesses, which Mr Arun Bharat Ram so graciously let me do, and then patiently nurtured it to maturity. My first meeting with Dr Kume came in this phase.

In learning TQM I have accessed sources from all over the world – the U.S., Europe and Japan. But I have a special place for Dr Deming whom I have never met, but have nevertheless been deeply influenced especially by his vast humanism from 1993 onwards, when I first read his book *Out of the Crisis*.

Dr Deming's system of profound knowledge had four parts: Appreciation of a system, knowledge about variation, theory of knowledge, and what he called knowledge of psychology. Some look upon Dr Deming as a statistician, others as a systems thinker, and some uncharitable ones as a dreamer. In fact, Dr Deming had developed his thoughts over many decades. It was his friend and mentor, Dr Walter Shewhart, who had introduced him to the work of C.I Lewis (Mind and the World Order). Dr Deming had to read the book over and over again to grasp it. Lewis is classed as belonging to the pragmatist school of philosophy, after C.S. Pierce, William James and John Dewey, though Lewis differentiated himself as a conceptualistic pragmatist. Dr Deming also developed his concepts regarding operational definitions from the physicist Percy Bridgman. Pragmatism holds that we always have to use our prior conception to build our experience. All knowledge is probable knowledge, and hence the idea of 'degree of belief'. As in Bayes' theorem, continual update of prior knowledge is emphasized. Deming wrote: "Empirical evidence is never complete." This leads to the necessity of strong grounding in theory. "Without a theory, any prediction, and any decision based thereon is risky," wrote Dr Deming." He stressed that experience without theory teaches nothing. "The day is past," he announced, "when 'theoretical' meant impractical." Compare this with what Einstein had said: "Without the belief that it is possible to grasp the reality of our theoretical constructions, without the belief in the inner harmony of our world, there could be no science."

In pragmatism, logic does not have the last word, since we believe the truth from living experience, and so the heart has a place, and feelings. Part of the resonating humanism of Dr Deming stems from this. It even permeates his statistics, which shows how probable futures can be deduced from subject matter expertise but not from statistics alone. Dr Deming saw the fallacy of significance testing in predictive or analytic work. When variation due to special causes is eliminated, there remains the domain of management in looking at common causes, and hence the futility of interpreting differences as related to individual performance. Always, Dr Deming's thoughts were with those demoralized by the system and its faults, helplessly.

Under the influence of these ideas, in SRF we reached out to Ron Moen, a Deming follower, to teach us planned experimentation. These methods work on building our degree of belief, mainly though control charts. Some Deming examiners were surprised with such methods, but SRF has held on. We also know that the use of long-term graphs and simple control charts can help in both maintaining *status quo* and in making improvements, provided we follow the Deming-Shewhart rule that original data should be presented in a way that will preserve the evidence in the original data for all the predictions assumed to be useful. Much of the pain people experience in problem solving as it is taught today is actually avoidable!

Dr Deming's opposition to performance appraisal, which he considered as a futile inspection that disheartened and crushed children and adults equally is deeply etched in me. It has been my dream to see companies abolishing this odious system, which our HR professionals are taught in business schools as a key job in HR. I hope that we will see more of happiness than stress in some future version of western management.

Talking of Dr Deming, I have to go back to 1946, the year I was born. Dr Deming made the first of his three vists to India from October to December that year as a consultant in sampling to the Government of India upon "the invitation of the great Dr Mahalanobis." He then attended the Indian Science Congress at New Delhi from January 03 to 08, 1947, as a representative of the American Association for the Advancement of Science. The Congress had none less than Jawahar Lal Nehru as the General President, keen as ever to promote 'scientific temper' – a phrase that later got into the Constitution of India as one of the duties of a citizen. It was Nehru who had urged a programme for inviting representatives from foreign societies and academies to the Congress. From here, Dr Deming left for his first visit to Japan.

Dr Deming's second visit to India in 1951 was also in the same capacity as a consultant in sampling, as was his third and final visit in 1971.

In this third visit, Dr Deming delivered a keynote speech at the All-India Conference of Quality Control in New Delhi, at the invitation of the Indian Statistical Institute. The title of his talk was: *Some Statistical Logic in the Management of Quality*. You can read it from the Net today. His speech was a precursor to a lot of what he wrote in his famous years from 1980 onwards. 1971 could have been the moment for India to make a breakthrough of the kind Japan made in 1950. It was not to be. Perhaps India was not ready for Dr Deming.

Dr Deming's basement office in his home in Washington stacked just about every issue of *Sankhya*, the journal of the Indian Statistical Institute, which thrives to this day. He also contributed an invited paper to *Sankhya*, Vol 24, 1963, titled "On some of the contributions of *interpenetrating networks of samples*," in honour of P.C. Mahalanobis's 70th birthday. He is also said to have written a paper titled "Statistical Methods as a National Resource," in the

Bulletin of the Indian Society for Quality Control, Vol 1, 1953: – but I can neither trace anything about such a society nor a copy of this article.

In his 1971 Delhi keynote Dr Deming showed his appreciation of Japanese QC circles, writing that "a certain amount of experimentation and recommendations for action on common causes may be decentralized, as in the QC circle Movement in Japan." At this time India seems to have had no knowledge of this Japanese practice. In 1983, responding to a letter from the Quality Circle Forum of India, Dr Deming wrote: "You may know from my speech in Seoul that QC-Circles are important, but management has many tasks to perform, some of which will require many years, before QC-Circles can become effective." That was prophetic, because QC circles later became effective in India only after TQM was adopted. Note that Dr Deming, like the Japanese, refers in his letter to *QC circles* – not *quality circles*, which is an American distortion.

Through all this, Dr Deming emphasized that he was not a management consultant but a statistical consultant. He never did create any management mechanism to help apply his revolutionary ideas. The unique management mechanisms of TQM – large-scale kaizen activities, QC circles, Daily Management, Policy Management and Cross-functional Management in their evolved form have all been the contributions of the Japanese. Some core methodologies like problem solving have also come from Japan, though there is American influence too. Quality standards have in the main risen from Europe. And most important statistical tools – barring what Dr Taguchi brought in, have come from the West – both Europe and the U.S. In semantic tools, the contribution is mixed. Today, any quality professional worth his salt has to necessarily apply knowledge from both the East and the West. Though the tribe of Deming followers has demonstrated many improvements mingled with humanism, they are off the mainstream probably because they spurn management vehicles, and some methodologies as well.

In 1986, Mr Janak Mehta, from his position in CII, invited Dr Deming to visit India, but this did not materialize. It was an exceptionally busy year for Dr Deming in the U.S., and he also lost his wife in June.

By the way, Dr Deming's mentor, Dr Walter Shewhart who devised the first control charts also visited India three times, as a guest of Dr P.C. Mahalanobis. He even received an honorary doctorate from ISI in 1962. That surely must be another saga to be researched by someone sometime!

Dr Deming's epochal visit to Japan in 1950 happened in a context that was vastly different from today. Atom bombs had just been dropped on human populations. Fresh in the mind was the tally of 17 million dead in World War I and 50~80 million in WWII. That deadly artefact, the cigarette was not only advertised but was fashionable. The cold war between the Soviet and the Western blocs rose to a peak, along with race for arms and the conquest of space. Also, the world was getting decolonized. In 1945, when the United Nations was constituted, a third of human population lived in countries ruled by colonial powers. By 1960, 36 countries had broken free. But racial segregation persisted, especially in the U.S. and in South Africa. Quantum Physics, which had shaken the world of physics by 1930 had hit a plateau, which still holds. DOE and other statistical procedures had to be performed manually or with mechanical calculators. Graphs had to be drawn by hand. And given the rudimentary state of electronics, mechanical ingenuity was at its peak.

The challenges today are vastly different. If we are to practice TQM today, the basics of the 1950s may still be sound, but as the problems have changed. Human population stands at 7.5 billion, up from 2,6 billion. World GDP is up 7 times since 1950 – with similar increases in primary energy consumption, fertilizers, water, paper, transportation and so on. CO₂ in the atmosphere has now risen to about 400 ppm against about 310 in 1950. Nine billion tons of plastics, which barely existed then, clog the earth and the oceans. In some classes, bio-extinction is 10000 times the background rate. Marine fish capture peaked in 1996, as there aren't enough fish left. We produce 100,000 chemicals, mostly of unknown toxicities, and witness stratospheric ozone accumulation, ocean de-alkalization, loss of tropical forests, top soil and so on. Hormones and antibiotics, pesticides, heavy metals, oils, or endocrine disrupting chemicals and other substances find their way into our food. We see the rise and rise of cancer, heart disease, allergies, obesity, but a fall in communicable diseases. Overall, global life expectancy is up from around 48 in 1950 to about 70 today. Global illiteracy is down from 64% in the 1950s to about 14%. All that hasn't, however, stopped religious terrorism, or the fading of liberalism.

So, we can see that Management based on Quality evolved under certain conditions and for a certain purpose. Those conditions have changed unalterably. Over and above the global conditions we have just talked about, here are some examples from business operations:

- Today, profits can go up or down abruptly due to global volatility, masking the effects of systematic work.
- Market economy and the power of financial markets have become stronger than ever. Money dominates. Venture capitalists fund start-ups, with the hope of exiting at profit.
- Manufacturing is getting more and more digitalized and has moved a lot from developed countries to China, S.E. Asia and others where it is conducive to make products.
- Serious threats to the planet's ability to carry the human population have emerged
- Service industries financial, hospitality, software, communications dominate.
- Work is more and more based on knowledge, and unskilled work has diminishing demand.

A lot of products and services we use today didn't exist in the 1950s. Mobile phones – leave alone smart phones; Internet; PCs, laptops; dematerialized books, music, photos, videos, movies; electronics in cars, fridges, washing machines; robotics; hybrid, electric, or hydrogen fuel cell cars; online retailing, banking, journalism, education, health care, counselling; aggregation services like taxis or food delivery; 3D printing; software; space stations; drones; big data and analytics; polyester, plastics in general; minimally invasive surgeries; advanced medical diagnosis; IoT; and AI coming up on the horizon!

We, therefore, need a new definition of quality. One essential step is to stop doing harm. E.F. Schumacher, the economist, had pleaded that "the burden of proof should lie on the man who wants to introduce change, he has to demonstrate that there cannot be any damaging consequences." This is now called the Precautionary Principle, and is enshrined in the UN Global Compact and in Article 191 of the Treaty on the Functioning of EU, placing, in the absence of scientific certainty, all responsibility on business.

The definitions of quality, evolving from the 1950s, have not, in my opinion, caught up with the concept of unproven but potentially harmful effects on users and society, despite Taguchi's view of quality as the degree of loss to society. Indeed, the Hippocratic oath of 'First do no harm' hasn't got assimilated in quality yet. Even though the latest Deming Prize model and even ISO:9000-2015 touch upon society, they do so only peripherally.

It is therefore time to enlarge the meaning of the term quality. For a long time now, quality has encompassed design, suppliers, production or service, and customer experience. To this we now need to add society, definitively. Without destroying the basic ISO definition of quality we can redefine quality at least as:

Fulfill stated, implied and latent requirements of customers and society while causing no harm.

What we have done is to add society explicitly and stipulate the concept of 'no harm'. In the context of the conditions we described about today's world, this proviso should address all the threats we face through the degradation of living conditions on earth.

In the 1950s, the functions of quality management were to produce and continually improve quality both from the point of view of efficiency and costs on the one hand and customer satisfaction on the other. Thus came the Shewhart cycle and then the PDCA cycle. Also, in his 1954 lectures in Japan, Dr Juran had explained what he called the ethical imperative of quality for exceutives. All these continue to stay important. Over decades, manuafacturing has fairly mastered basic quality. Take automobiles – there is uniformly high quality across the world, if for the moment we disregard the new definition of quality. But there are so many new businesses and products and services out there, which have cropped up without grasping these fundamentals. For example, the quality that we experience from some of the newer gadgets or online services do not quite measure up in terms of ease of use or freedom from glitches.

But even if all these things improve, human existence continues to be under increasing threat. Quality management cannot ignore this aspect if it wants to stay relevant. That means that people like us have to rethink our role. If quality management has not much to do with enabling humanity to thrive – which requires a healthy planet as a precondition – then we really are of no consequence. The aim of quality management, therefore, has to be:

Through quality, enable humanity to thrive in healthy planet

My own model of what I call QBM or Quality-based Management, has evolved as an amalgamation of Japanese approaches with those of Deming and from other American and European thinkers, the experience gathered in India over three decades, and of course the recognition of the planet-level challnges we face. The model is always developing, never complete; but it is always intense. Let us look up a few principles: firstly about customers:

To me, QBM means that serving the needs of our customers takes precedence forever over every other objective. This of course is a statement fit for businesses. For a hospital, forever serving the needs of the patients takes priority over all other objectives. (This we know is not quite happening, from many well-publicized episodes.) For an educational institution, serving the needs of students ought to take precedence over every other objective. And for a government agency, serving the needs of citizens should be an overwhelming priority over any other aim. This we know for sure is not happening! Now imagine a world with such priorities. Do we sense a transformation? That is the power of QBM, properly understood. Further, extend all this to the idea of creating no harm – not only to the immediate user, but to all those directly or indirectly affected. To start with, we can even treat the idea of no-harm as a condition to be fulfilled, a constraint, as in any optimization system. You maximize satisfaction of the 'customer-patient-student-citizen' and society within the constraints of doing no harm! This is the way we need to go, for now – before integrating society and planet wholly.

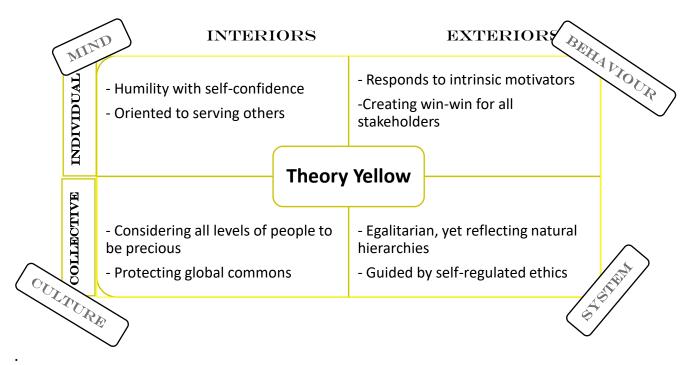
In this regard, I have some concerns about Six Sigma practice – not so much its methodologies and tools, but the underlying philosophy. In their seminal book, Mikel Harry and Richard Schroeder assert that Six Sigma "... is about improving profitability, although improved quality and efficiency are immediate by-products." And again, "Six Sigma is about making money." In this system, serving the customer is not paramount, it's a by-product.

A guiding feature of the Japanese style of TQM is its emphasis on observations at the gemba, where the action is. The approach is 3H – using one's head, heart and hands. Way back in the 1890s, the great Swami Vivekananda had called out to his countrymen that there was a need to be "… great in heart, great in mind, great in deed … such a combination of head, heart and hand is what we want." This idea is central to TQM and gives it its inherent vitality. It's not a PowerPoint system of management. It's hands on, and relates to the frontline people. Though that great pioneer Shewhart created the wondrous system of control charts, it is said that he never went to the shop floor. Dr Deming did – having been of necessity skilled with his hands from childhood on, but it wasn't central to his way. It was left to Japanese like Dr Ishikawa to bring this emphasis on observed reality, without which we cannot conceive of TQM today.

Dr Ishikawa had made respect for humanity central to TQM. The view we take of humanity changes everything about our management system. Without going too much into its backround, let me abruptly present Theory Orange – which to my mind summarizes the worldview among those in decision-making levels in the world today.

	N	ND INTERIORS	EXTERIORS
	INDIVIDUAL	 Egoic Oriented to achievement and entertainment 	- Competitive - Responding to extrinsic motivators - Perfunctorily satisfying customers
		Theory	Orange
CODT	LECTIVE	- Creating wealth for shareholders	- Meritocracy
	LIEC	- Seeking endless growth	- Profit-driven, mainly
	OLJ	- Rational-scientific	- Creating global markets
	\sim	- "People work for rewards"	- Depending on regulatory systems
	UR		

The left half describes the subjective at the individual and collective levels and the right half represents the objective, observable part. For the individual, it is an egoic level, alternating between achievement and hedonism, while the collective position is both rational and moneyoriented. Individual behaviour is competitive and conditioned to external rewards, and the culture promotes market economy and the pursuit of self-interest. And this theory exerts the greatest power in the world of today.



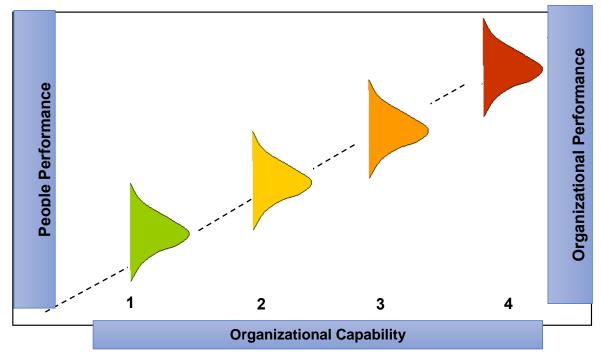
Both Dr Deming and Dr Ishikawa are unites in coming from an alternative worldview – represented here as Theory Yellow. The interiors bring up service and protection of global commons, while societies are characterized by egalitarian, win-win ethics. If those in power evolve to this level, then all motivational patterns in the world would change. What might happen? This bears further research.

A fascinating aspect of Dr Deming's lifelong pursuit is how he weaves his statistics with his view of management's responsibility and his concern for those in the frontline. A combination of line graphs (supported by a median line) and what we might call the basic control charts can help us separate causes that belong to the system in operation, versus special or assignable causes that arise from disturbances to the system or from outside it. Workers (or for that matter, salesmen, students or citizens) are routinely blamed in undeveloped organizations for problems created by systemic causes over which they have no control. With such thinking, companies can stagnate for decades even as managers move up, leave or vegetate, and workers become inured to a prolonged state of demoralization. Thus, Shewhart charts not only help solve problems, they transform the conditions in a company, lift up morale and motivation, even as they raise the level of scientific thinking. The Japanese seem to take to this naturally, as workers are not habitually blamed in that culture. For us in India and in the western world, these simple looking methods yield nothing short of a revolution.

These very same methods also reveal the fallacy of performance appraisal, and more so, destructive ideas like forced ranking, or the use of the so-called bell curve, which is a Gaussian

or 'normal' distribution. In the current use (or rather misuse) of statistics, data is checked for normality to verify its randomness – though Shewhart charts are valid for a variety of distributions and therefore do not stipulate a normal distribution. But professionals in social sciences forget that for the most part points in a bell curve are independent of each other and are random. So, when they use it to slot performance of employees, they are in effect running a lottery. This is a vast subject but the bottomline is that the pernicious system of performance management with its unjustifiable rewards and punishments remains unconquered.

Dr Deming passionately argued that management's task is to improve stable systems. When that is done, everyone's performance would rise. The bell curve would shift, wholesale, as in this picture.



Dr Deming also showed the value of teamwork, with an algebraic formula that showed combined performance of 'n' people as the sum of individual performances plus the sum of 'n' orders of interaction, each of which could potentailly be negative. Thus human performance in an organization may be viewed as a product of individual willingness (and responsibility-taking) with teamwork and of course knowledge and skills. If teamwork is negative, then the organization's outcomes are vitiated entirely. Teamwork is also key to producing happiness at the workplace. Indeed, organizations should try to create happiness in the workplace, regardless of any other consideration. It is good to remember that it is happiness that we are talking about, not just satisfaction. Companies or plants that have succeeded in this measure have also shown magical transformation and yes, performance.

Another aspect of the practice of quality-based manangement is its integration with two other approaches which are closely aligned. One is of course the Toyota Production System, miscalled Lean in the West. My own learning in this field I owe to Mr Ram Mohan. The other is Total Productive Maintenance, which has emerged strongly ever since Nippondenso became its first award winner in 1970. TPM is especially powerful when used in conjuncton with TQM. Mr Snehil Kumar fanned my interest in TPM and in shop floor management where he has the

knack of touching sore points unerringly. In his visits, Dr Kume would ask, as soon as he stepped out of the airport and was seated in the car: "How is your TPM?" Many companies tend to view TQM, TPS and TPM as distinct initiatives and then are puzzled that their employees are confused. The trouble is that each approach carries overlapping elements with other approaches, with many small differences. Integrating these into one solid initiative offers a synergy that can produce astounding results.

Mr Snehil Kumar also gave me a profound insight about the necessity of expending energy beyond a threshold to produce any result. Half-hearted effort leads to nothing. This is also in synchronization with concepts in physics and other fields.

In a 30-year TQM journey, I have been extremely fortunate. First was stumbling into SRF Nippondenso as its head. Then meeting Mr Janak Mehta and associating with CII. Working in Nippondenso brought me into the mainstream of TQM, being allowed later by Mr Arun Bharat Ram to promote TQM in SRF. Mr Mehta also enrolled me as a cofounder when he formed ISQ. At CII I got to know Dr Sarita Nagpal, who put me up as the chair of the TQM Technical Committee of CII, for as long as seven years, and got me into the lead in organizing CII's massive annual Quality Summits. Together with Mr K. Mahesh of Sudaram Brake Linings, Dr Nagpal and I also launched a cluster run by CII and the Automotive Component Manufacturers Association. This is a system of promoting TQM simultaneously in a bunch of volunteering companies through guidance and mutual learning. CII brought me in contact with so many sterling professionals including Mr Kiran Deshmukh here. In 2002 I got inducted into the Global Quality Futures Workshop, where I not only met Dr Kano and Dr Iizuka, both of whom taught me many things, but also some Deming followers from U.S. and U.K. including Messers Ron Moen, Lloyd Provost, Charles Liedtke and Jan Gillett to name a few (and unjustifiably not naming many others). Mr Ravikant has worked with me for 23 years now, and has unfailingly raised my level of thought by being a sounding board and by raising questions. I have seen how Mr Anil Sachdev, so mild and unassuming, earned the respect of everyone with his deep knowledge of TQM, especially its statistics. I also had the fortune of joining the National Accreditation Board for Certifying Bodies for four years and then functioning as its chairman for another four. It was a great experience to help SRF win two Deming Prizes, in 2004 and in 2012. In 2005, the late Mr Davasia of the Mahindra Group founded the redoubtable Mahindra Institute of Quality, MIQ, and I gladly accepted the opportunity to work with him and Dr Kume from the concept stage onwards, and then into the design of the PG Diploma in Quality Management course, and teaching alongside Dr Kume. In 2003, Mr Mehta was in the forefront of the formation of the Asian Network for Quality, and I had the good fortune of organizing the two ANQ Congresses in Delhi, in 2004 and in 2010. Around this time, Dr Gregory Watson persisted with me despite my reluctance, and helped turn me into an Academician of the International Academy for Quality, where he has continued to encourage me. This furnished me great opportunities to pursue some research work, especially on quality management applied to Planet Earth Concerns, and working in a Think Tank with Academicians like Lars Sorqvist, Mats Deleryd and Willy Vandenbrande. After a so-called retirement from SRF, I have also had the fortune of working with some great professionals like Dr Osada, Mr Ando and Dr Yamada and some very committed companies - Tata Steel, Ceat and Ashok Leyland, Indus Towers to name a few, and on the encouragement of Dr Kume, JSW Steel, Vijayanagar. At Ceat, Mr Anant Goenka, MD, observed: "As a result of TQM, the customer has become the

heart of all that we do and the way we think. There is a shift from direct profit and revenue focus towards a strong belief that only customer satisfaction will eventually lead to profits."

In this entire voyage, the patient sacrifices of my wife, Lakshmi, who has had to manage everything about the home and the family as well as my schedules and arrangements even as she has carried on her own activities first as a teacher and then as a volunteer and activist. To her and to my family I owe an unrepayable debt. And so also to my many friends with whom I am able to take off after long gaps as if nothing intervened in between.

So, what do we, as quality professionals, have to do? Let's ask ourselves some questions. Have companies around the world adopted a form of TQM as their management way? Have most health care organizations or drug companies? Have eductaional institutions? Have governments? NGOs? How about New Age Digital businesses? Has TQM improved the ethical standards of business as a whole? Has TQM addressed planet earth concerns? The answers have to be between a flat 'no' to 'well, yes, moderately.' My friend Mr Vijay Gambhire of Ceat, asked me the other day: "In that case are professionals like you responsible for the current state?" I said yes. "Then what have you as an individual done?" he asked. Well, I have explained for the past half hour or so a little about what I think I may have done. It clearly isn't enough. I hope a lot more wholly committed individuals spring forward in this field and help transform the world. That is the way to stay relevant.

So, to ask again, what do we do? Here s a sampling:

- 1. Adopt the new meaning of quality, uncompromisingly.
- 2. Embrace, wholeheartedly, the new aim of quality management incorporating society and planet.
- 3. Master the philosophies underlying quality focussed management.
- 4. Confidently explain and propagate these philosophies.
- 5. Embed the idea of customer-patient-student-citizen always claiming priority over other objectives
- 6. Reach out to new age businesses many of whom are in services. Involve health care, education and governments.
- 7. Do the utmost to generate everyone's partcipation. Spread happiness without dangling carrots as rewards.
- 8. Integrate your work at all levels from the president to the worker and apply TQM, TPS and TPM simultaneously.
- 9. Employ Deming statistics in looking at problems and solutions through the lens of graphs and conrol charts, from top management and Boards downwards.
- 10. Create and join institutions that promote research, teaching and counselling, bringing the world's best brains together, so that our knowledge advances forever.

Indeed, we have a formidable amount of work to do.

We cannot rest.

And now, over to the President of ISQ.

N. Ramanathan