



INTERNATIONAL  
ACADEMY for  
QUALITY

# IAQ Newsletter 2023

#IAQ/2023/01

[www.iaquality.org](http://www.iaquality.org)



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# About IAQ

IAQ is an

**INDEPENDENT,**  
**SELF-SUPPORTED,**  
**NON-PROFIT,**  
**NON-GOVERNMENTAL  
ORGANIZATION**

that is administered by a collegial assembly of individuals who have been elected by their peers from among the most respected, active & experienced protagonists of quality in the world.

**Academicians are invited proportionately from among the major regions of the worlds & are approximately divided into thirds from Asia, America, & Europe-Middle East and Africa.**

Currently, members represent over

**45  
Nations**

Academicians make significant personal contributions to the advancement of quality and collaborate on team-based projects through participation in Think Tanks that operate within the Academy.

Academician outreach has helped to establish many of the national and regional quality organizations and IAQ has supported the United Nations in its early efforts to bring quality to the developing world. Currently, IAQ is assisting national quality movements in Brazil, Russia, India, and China as they develop mature programs that support capacity development.

# Think Tanks

IAQ think tanks operate as the execution arms of IAQ for the fulfilment of the organization's mission.

**They are voluntary research groups that have come together to work in specific areas and are dedicated to the convergence, consideration, and advocacy of quality within those defined areas.**

TTs allow participants an opportunity to reflect on significant issues, challenge policy orthodoxy and provide innovative direction to shape emerging problems that help determine future directions within their specific areas.

TTs need to define the role and approaches of quality within their areas in order to bring new knowledge and create useful outputs for the improvement of humanity.

Think Tanks currently address the following areas of application:



Education



Governance



Healthcare



Logistics



Voice of Customer



Planet Earth Concerns



Applied Statistics



Innovation & Quality



Quality 4.0



Accelerating Continuous Improvement

In the future it is desired to establish many more TTs that can take up quality issues in other relevant areas, and to have every IAQ member attached to at least one TT.

# IAQ Leadership Team

## CHAIR



**Shinichi Sasaki**

## PRESIDENT



**Lars Sorqvist**

## PRESIDENT-ELECT



**Raul F. Molteni**

## BOARD OF TRUSTEES



**Yukihiro Ando**



**Elizabeth A. Cudney**



**John Dew**



**Pedro M. Saraiva**



**Sunil Sinha**



**N. Ramanathan**

## EXECUTIVES OF THE ACADEMY



**Catherine Chan,**  
VP Communications



**Grace D. Brannan,**  
VP Publications



**N. Ramanathan,**  
VP Examining



**Pedro M. Saraiva,**  
VP Conferences



**Paulo Sampaio,**  
Secretary-Treasurer



**Hiroe Tsubaki,**  
VP Publications Supporter

# Chairman's Message

## I am honoured to have been appointed as the new Chair of the Board of IAQ.

Looking back on my two-year stint as the President of IAQ, I realize that despite my limited exposure as a member of IAQ, we were able to start some initiatives, such as creating think tanks, collaborating with regional quality organizations such as ASQ, EOQ, and JUSE and even successfully conducting online annual general meetings during the pandemic.

This would not have been possible without the generous support and cooperation of Liz (former Chair of Board), Lars (new President), Beth (former Secretary-Treasurer), and many other members.

IAQ will need to continue to respond to many global issues such as Sustainable Development Goals, Carbon Neutrality, and Digital Transformations, as well as to changes in customer values and technological evolution. I hope that IAQ will continue to move forward in these endeavours under the new leadership.

There is a Japanese proverb, 'FUEKI-RYUKO' which means 'The unchangeable and the fashionable are equally important.' This saying emphasizes the necessity of appreciating the true meaning of things that have been cherished for a long time and preserving them, while at the same time being flexible enough to adapt to new ways.

I would like to keep these words in mind as Chair of the Board of IAQ as we take on new challenges in 2023 with all colleagues, while utilizing the wisdom of my predecessors.

I would like to offer my best wishes for a wonderful year ahead.

Best Regards,

**Shinichi Sasaki**  
Chair of Board, IAQ



# President's Message

As you know, the International Academy for Quality is a highly regarded organization focused on advancing quality throughout the world & thereby benefitting humanity.

Today, the importance of quality is higher than it has ever been. Having achieved a respectable status in the field of quality globally, IAQ needs to future proof itself in order to continue to remain relevant and attract younger leaders to participate in shaping the organization's ongoing journey.

It is my job as the IAQ President to charter this path along with the involvement & commitment of every one of our officers, leaders and think tanks.

A vibrant IAQ, with members actively involved in furthering quality will be imperative for succeeding in our mission. This can be achieved through active participation in think tank activities, research, training & education and engaging with our customers; which are primarily organizations across the world; to enable and strengthen their quality journey. IAQ should embody excellence through continual improvements & innovation, which is only made possible with all members involved.

Online interactions have served us very well in furthering IAQ and think tank agenda, during the pandemic. It is now time to amplify that involvement through our face-to-face meetings and activities. In 2023 we have planned two important in-person general meetings (GMs). A third GM will be conducted online. The first GM will happen in Philadelphia from 10 to 12 May, directly after ASQ WCQI. The second GM will be in Porto on 7 & 8 November, just before the EOQ Congress. The focus in both of these will be the evolution of IAQ, exchanging of ideas and finding new inspiration. At the EOQ Congress IAQ will also lead its own section. I look forward to your continued online participation through think tank activities and most importantly your presence in the forthcoming in-person GMs.

We have a big ambition to achieve, that lies ahead of us. And, in this journey, whenever we are met with challenges, we will respond with our determination in three simple words – **YES, WE CAN.**

Best regards,

**Lars**

IAQ President & friend



# Reports from Think Tanks

## Quality in Education Think Tank (QiETT)

**Kamran Moosa**  
Chair

**Matthew Barsalou**  
Co-Chair

The Quality in Education Think Tank (QiETT) has undergone changes since the last newsletter. Pedro M. Saraiva and Elizabeth A. Cudney have moved on as chair and co-chair, respectively, and Kamran Moosa is now chair with Matthew Barsalou as co-chair.

**QiETT currently has 19 members from 5 countries dedicated to the pursuit of quality in education.** Their names are Ahmad Elshennay, Anil Sachdev, Elizabeth A. Cudney, David Hutchines, Bo Bergman, Jiju Antony, John Dew, Jorge Roman, Joseph DeFeo, Juhani Anttila, Kamran Moosa, Kwai-Sang Chin, Mansoor Alawar, Matthew Barsalou, Ngo Van Nhon, Paul Harding, Rey B. Fremista, and Zhen He.

QiETT is pursuing three quality related themes pertaining to management systems, academic processes, and online education.

Management of Quality in Higher Education	Quality of Education Delivery Processes	Challenges in Quality of Online Education
Quality Management Models and Methodologies such as Kaizen, Quality Circles, Lean Six Sigma, Balanced Scorecard, ISO Standards and TQM	Quality of learning taxonomies, teaching methods, assessments, curricula, student counselling, etc.	This includes experiences, best practices and new research on how to improve Quality of Online education

To support these three themes, QiETT members will produce White Papers, deliver Webinars, conducted by both IAQ members, and invited external experts. QiETT also aims to share best practices and experience and organize debates related to Education Quality. QiETT members will also participate in cross-country research on Education Quality. QiETT aims to add value in Education Quality through

1. White Papers
2. Webinars
3. Debates on Quality Challenges
4. Sharing of Best Practices
5. Cross Country joint Research among members





## QiETT in 2022

QiETT hosted an International Virtual Summit on the Future of Quality In Education, which was held across four days in December 2022 and featured 13 international speakers. The Summit started with a presentation by Dr. Kamran Moosa (CEO, PIQC Institute of Quality, Pakistan; Chair, QiETT) on the topic of "Metacognition: Improving Students' Quality of Learning – Students' Perspective". This was followed by Dr. Pedro Saraiva (Vice-Rector of the NOVA University of Lisbon; President of the Portuguese Association for Quality) presenting "Entrepreneurial Universities' Education". Day 1 was wrapped up with Dr. Lotto Lai (Adjunct Professor, CityU; Former Chairman, HKSQ) talking about "Innovation Methodology & Training Cases in Hong Kong Universities."



On Day 2, Dr. Lars Sorqvist (President, IAQ, Sweden) started the day with a presentation on "Education 4.0 – Getting high-quality education with blended learning." The next speaker was Prof. Moustafa Nouredin Hassan (Vice-Chancellor for International Cooperation, Hamdan Bin Mohammed Smart University Dubai-UAE) and his presentation title was "Global implementation of Benchmarking Framework for Online Higher Education." Dr. Ngo Van Nhon (President, IQAD; Chairman, VQAH) brought a close to Day 2 with a presentation on "Sustainability Education Development with Integrated Management Systems Approaching".

On Day 3 we had the opportunity to listen to Dr. Narimane Hadj-Hamou (Founder & CEO, CLICKS, UAE) on the topic of "QA in Non-Traditional Education." Dr. Kim Stansfield (UK Rep. International Council for QFD (UK)) was next with a presentation on "Improving Technology Enhanced Learning (TEL) Selection & Deployment Using Modern QFD: A Virtual Reality Case Study." This was followed by a presentation by Dr. Jorge J. Roman (Business Excellence Advisor, Dubai Police (UAE) about the "Future Trends in Higher Education." Finally, Dr. Robin Mann (Centre for Organizational Excellence Research, New Zealand) ended the day with a presentation on "Benchmarking in Higher Education."

On the final day, Dr. Rey Fremista (President, Philippine Society for Quality, Inc.) was the presented on the subject of "Best Practices of Philippines Quality Award Recipient Universities." Dr. Ahmad Elshennay (The UCF Quality Institute) was the second speaker on this day and made a presentation on "Quality 4.0 in Education." Mr. Anil Sachdev (President, TQM International Pvt. Ltd (TQMI) – India) was the final speaker of the Summit and spoke about "New Trends in Quality Trainings."

Each day's session ended with a Q&A with the speakers, and we concluded with the Summit being deemed a great success.

**QiETT also shares with profound grief, the loss of a treasured friend and QiETT member Dr. Ngo Van Nhon who passed away on 28 December 2022 after a period of illness.**

**Dr. Ngo Van Nhon will be missed.**

Should IAQ members be interested in joining QiETT on its journey in 2023 you are requested to reach out to **Kamran Moosa** - [kamranmoosa@piqc.edu.pk](mailto:kamranmoosa@piqc.edu.pk) or **Matthew Barsalou** - [matthew.barsalou@gmail.com](mailto:matthew.barsalou@gmail.com)

# Quality in Governance Think Tank (QiGTT)

**Marcos Bertin**  
Past Chair

**Raul F. Molteni**  
Chair

The Quality in Governance Think Tank (QiGTT) aims to analyze, promote and implement Quality concepts, methods and tools in corporate governance as a key factor for maintaining the commitment and considering the interests of all stakeholders, sustainability, ethics, and efficiency as a focus of attention.

## Marcos Bertin Quality in Governance Medal

The International Academy for Quality (IAQ) Marcos E. J. Bertin Quality in Governance Medal recognizes exceptional contributions to the practice or development of sound principles of good governance based on application of quality-related principals and methods.

This Award honours IAQ Past-Chairman and Honorary Member Dr. Marcos E. J. Bertin for his sustained contributions in the field of corporate governance and his promotion of the application of quality-related ideas throughout the world for which he received the IAQ Founders Medal.

We are currently in the process of acknowledging candidates for the Marcos Bertin Quality in Governance Medal. Your suggestions and recommendations are welcomed.

### Our Projects How



#### **Marcos Bertin Quality in Governance Medal**

Recognize an individual or group as role model



#### **Quality Guide for Boards Framework**

Let them know and promote the use of quality principles and tools within Board practices



#### **Papers and Books**



#### **Channel for IAQ TTs**

IAQ Manifesto and IAQ TTs messages



## Future in Corporate Governance Project

A Task Force was formed and is led by Academician Hugo Strachan. It is working on structuring all the insights and suggestions that came out of the workshops and surveys done with board members from International companies.

The Task Force will have a first version of a Quality Guide for Boards by March 2023.

It will be tested/ piloted by Boards for their comments and suggestions before it is shared onwards with Quality Professionals and specific Board organizations around the World such as International Finance Corporation (IFC), Organization for Economic Cooperation and Development (OECD), and National Association of Corporate Directors (NACD).

PXS, from Costa Rica, has already volunteered to use the guide in their board process and give us their insights to improve the guide. We look forward to receiving many more volunteers to test pilot the guide.



Suggestions for testing boards are welcomed.

## Quality Guide for Boards Future in Corporate Governance Project Process



# Quality in Healthcare Think Tank (QiHTT)

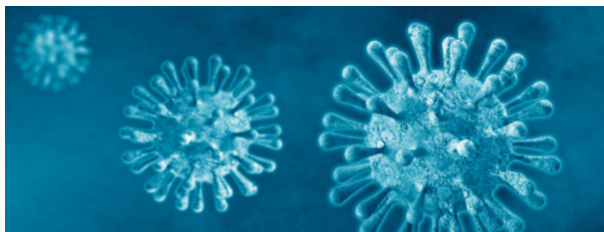
**Robert E. King**  
Chair

**Yoshinori Iizuka**  
Co-Chair

## **QiHTT Members**

Yoshinori Iizuka, Blan Godfrey, David Bonner,  
Dr. Ben Babaii, David Joiner, Alla Zusman & Robert E. King

One of the key activities of the health care think tank is to use our quality and innovation tools to better manage COVID. One of the projects was to reduce deaths in nursing homes. This was done by collecting thorough data and updating residents at least once a week on best practice behaviours. This almost totally prevented COVID in participating nursing homes.



Another useful approach was to use an enhanced form of failure modes and effect analysis (FMEA) improved with advanced innovation tools to enhance the ability to predict potential problems and come up with better prevention methods. One such technique was to improve the filtration system in schools. One of the large cities in Canada updated their entire school's filtration system based on our research.



The IAQ Healthcare think tank is also helping to save lives by dramatically reducing infant mortality.

It is our hope that our efforts will help IAQ to combat and solve some of the world's toughest health problems going forward and support the UN in achieving some of their toughest SDGs.

# Quality in Logistics Think Tank (QiLTT)

**Miroslav Drljača**  
Chair

**Grace D. Brannan**  
Co-Chair

Logistics is an activity that deals with mastering space and time at the optimal costs. A modern approach to supply chain (SC) does not end with the consumption of products or services, but implies feedback related to the selective collection of waste, recycling and reuse of part of the recycled material in the production process, and the part that cannot be recycled is permanently disposed of legally and harmlessly.

QiLTT's mission is aimed at producing relevant contributions related with alternative approach to understanding global phenomena such as logistics, for future development. We aim to define the role of quality in every logistics area with a focus on bringing knowledge and creating useful outputs to promote prosperity, freedom, safety, and democracy for all the people of the world.



We are intensively researching three case studies that are characterized by a major disruption in logistics processes and SC, with significant consequences on a global level.

These are

1. COVID-19 pandemic
2. The blockade of the Suez Canal and
3. The war in Ukraine



In all three cases, there were significant disruptions in logistics processes and SCs with significant implications for the global economy and the quality of life of all people on the planet, since these were disruptions in the SCs of strategic products such as food, energy, medicines and medical equipment.

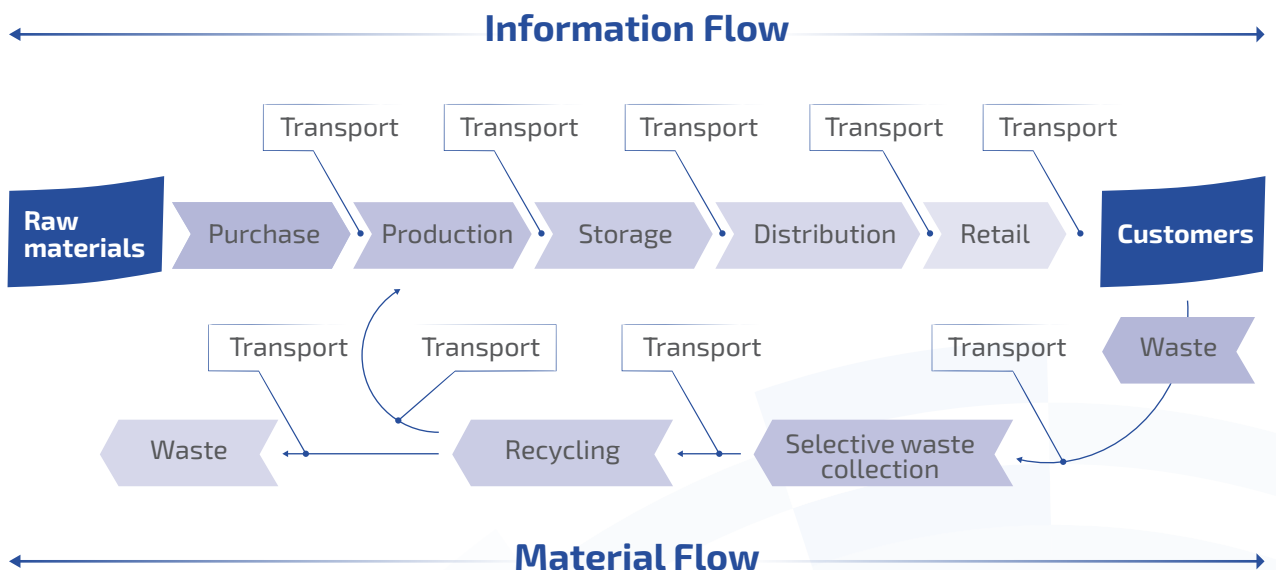
The research of these cases aimed to find out whether and to what extent the lack of quality caused these cases and their negative consequences. This research will continue, and the ultimate goal is, to design a management model for logistics processes and SCs that will make them more resilient in future crises.

There are three levels of models

- a model for individual organizations
- a model for national economies and
- a global model.

QiLTT will try to offer innovative quality solutions that will contribute to the quality of life for all people on the planet.

In the coming period, more logistics experts who are not members of IAQ will be involved in the work done by this TT to improve the quality of work and ensure the prerequisites for achieving the goals of IAQ-QiLTT work. Efforts will also be made to improve cooperation with other IAQ-TTs and strengthen already established cooperation.



## Voice of Customer Think Tank (VoCTT)

**Glenn Mazur**  
Chair

**Catherine Chan**  
Co-Chair

### **Active Members**

Anil Sachdev,  
Kim Stansfield

### **Support Members**

Elizabeth A. Cudney, David Hutchins,  
Benson Tendler, & You Jianxin

The Voice of Customer Think Tank (VoCTT) has been meeting online biweekly and have made the following progress towards our 2024 Vision.



#### **A. Provide framework for identifying, acquiring, and analysing customer voices.**

- A "maturity model" to identify users of the VoC framework has been detailed. Dimensions include geography organization type, customer type, and project complexity and are defined to three levels of involvement
- SIPOC (supplier-input-process-output-customer) models and sub models for the framework have been created under the leadership of Kim Stansfield to describe the VoC acquisition and analysis process. Sub models will be included in the final report
- A framework for identifying different use scenarios is being created under the leadership of Catherine Chan. This includes a 5W1H (who, what, when, where, why, how) breakdown of potential users who will then be prioritized based on urgency and familiarity of the users

**Future action plans for the VoCTT are:**

- Enterprise or organization self-assessment including as-is (current) and to-be (hoped-for) state. (To be led by Catherine Chan)
- Recommended methods and tools for each maturity level and combination of selected industry sector and size. (To be led by Anil Sachdev)
- Information sources/library for each recommended method and tool. Ex: papers, books, organizations, online or in-person training, etc. Foreign language sources should be included. We could even include materials that secondary and college educators could use in their classes. (To be led by Elizabeth A. Cudney)
- Roll out to other industry sectors and enterprise sizes. (To be led by Glenn Mazur)

**B. Build a reference and resource bank about VoC research and applications**

- We have currently identified one case study to be used in development of materials, based on a study in airport food service that deploys to a processed product, a service, and a software solution

**C. Identify missing or new areas to explore VoC**

**D. Publish 2-3 papers on achievements.**

- A briefing was presented at the 2021 International Symposium on QFD held in December 2022
- A paper on the VOC framework is being co-authored by all active members for presentation at the 2022 International Symposium on QFD to be held in September

The VoCTT will continue to conduct semi-monthly meetings interspersed with individual work by the active members.

The goal is to complete the framework this summer, followed by the user self-assessment and tools identification by end of 2023.

Identification of methods and tools, followed by developing materials for self-instruction, university courses, and professional use is planned for 2024.





# Quality in Planet Earth Concerns Think Tank (QiPECTT)

**Willy Vandenbrande**  
Chair

**Sunil Sinha**  
Vice-Chair

We live in difficult times with a war in Eastern Europe and climate change leading to growing and even more serious problems. There is no doubt that the need for actions towards a much more sustainable society is pressing.

As our former chair and esteemed academician Ram puts it: "Without quality there is no hope for the Health Of Planet Earth (HOPE)". This is an important mission for our Think Tank, focussing on the state of the planet, but is also the mission for IAQ as a whole.

It emphasises how important it is to focus our efforts so that quality creates a better world for humanity. Let us all work together within the limited capacity we have to contribute to this. Do not forget: even torrential rain is made up of individual drops. What we do, does count.

## 2022 Activities by QiPECTT

- Fortnightly meetings throughout the year
- Several of our members participated in conferences with contributions on quality and sustainability
- Organizing the 3<sup>rd</sup> QSA Award, incorporating new partners
- Expanding the team with specialists from outside of IAQ
- Inviting Mr. Vivek Talwar as guest speaker for the IAQ general meeting in Anaheim



On December 14 we had the final session of the 3rd QSA. From a total of around 80 projects 13 were selected to present in the final round. This global event showed once more how all over the planet organisations are improving their sustainability using quality methods and techniques. The jury granted 4 projects with the award.

1. The team of Xiangshui County Power Supply Branch (China) was awarded for finishing an R&D project, developing a High-efficiency Power Equipment Detection System, applying QFD and Multi-vision Intelligent Perception
2. Ashok Leyland Ltd. India for reducing carbon emission, and thereby contributing to SDG 13 Climate Action. This was done in the paint shop of Ashok Leyland Ltd. Hosur plant (India)
3. SRF Limited, India for creating a more sustainable production method, by building the technical capability to produce BOPET films using up to 90% PET Bottle crush and
4. Colquimica Adhesives, Portugal for being able to reduce the amount of glue waste by using a Lean-Green Value Stream Mapping methodology.



The team of Xiangshui County Power Supply Branch (China)



The team of Colquimica Adhesives (Portugal)



The team of SRF Ltd. (India)



The team of Ashok Leyland Ltd. Hosur plant (India)

Congratulations to the winners and to all participating project teams.

## Plans for the near future

- Expanding the partner base for the QSA 2023 to make this an even more global event
- Further developing the strategy with an application of our views and methods on a specific topic like reducing energy consumption
- Keep on participating in conferences within and outside of the quality community
- Looking for more cooperation with other TT's within IAQ



# Quality Sustainability Award - A Success Story

In 2020 IAQ started the Quality Sustainability Award (QSA). In line with the IAQ mission “**Quality for Humanity**”, the idea is, to recognize projects and project teams that generated results in sustainability by using quality philosophy, methods, and tools. The QiPECTT is responsible for administering this annual award.

In this first year we received about **30 applications**. The TT did all the evaluations and recognized **two winners** and gave a commendation to **13 other projects**.

For an inaugural year this was a great success, but we realized that if we wanted to expand our reach and impact, we could not do that on our own.

As many of our applications came from China and India, we created a partnership with CAQ and ISQ for the 2021 Award cycle. They organized a local contest and selected the best projects to participate in an open online final session. The QiPECTT selected finalists from the applications coming from the rest of the world. In the final round, the project teams presented a video of their project and answered questions by an international jury, who decided on the winners. This proved to be a very good model that was also used for the 2022 award with additional partners from Israel and Vietnam.

A description of the selected projects from the first three years can be found on the award website [www.iaqaward.com](http://www.iaqaward.com) where you also find more detailed information on background, content and evaluation criteria. **In these three years over 150 projects applied covering all aspects of sustainability as described in the 17 UN Sustainable Development Goals (SDG's).**

## The Journey continues: QSA 2023

The QSA 2023 will be organized in the same way as in 2022. Content wise nothing much has changed. The timing has been slightly adjusted: we now have an application period opening on April 1 and closing on June 30. The impact of this Award is directly related to the number of projects participating and the global reach of the participants. For this year we can announce that we have added a partner for South America (Peruvian PUCP) so we are confident more projects will come from this part of the world.

However, we do realize that for small countries / areas it is not easy to become a partner and to organize a local contest. But we would not want to miss out on interesting projects and therefore we are looking for promotional partners as well: local organizations that help to spread the news, leading to more "Rest of World" applications that will be handled by IAQ directly.



At this moment we have organizations in Portugal, Belgium, Sweden and the UK that will help us promote the award and if any of you wants to help your local companies to show what they are doing for sustainability through quality, please contact the QiPECTT and we will give you all the necessary promotion material.

# Applying Quality to Planet Earth Concerns

For about thirty years, Quality has been the only way systematic improvements have been made in the corporate sector. Problem-solving and improvement methodologies are core to Quality practices. The methods include problem-solving steps like the QC Story or DMAIC.

Recently, corporations have faced questions regarding the impact they produce on the environment. The usual remedies tend to be superficial, but even with serious intent, companies often realize only lukewarm outcomes. It is reasonable then to ask -

**Can standard improvement methods be used to solve sustainability problems?  
The answer, simply, is YES.**

The methodologies of Quality improvement are designed to solve problems, universally. And yet, that would constitute only a half-hearted use of the power of Quality. To attain the potential of Quality, companies should shift up to the strategic level, and also to the level of principles. Plainly, this would call for being grounded in reality while at the same time carrying a lofty vision. (Figure 1)

Through the mechanism of Hoshi Kanri, Quality helps define strategies that are customer-oriented. Annual strategic objectives are deployed down the organization together with the means of achieving them. Then everyone in the organization understands how the objectives flow. When employees gain experience in improvement activities, they become confident about taking on challenging targets, and get to feel the joy of achievement. The idea - that everyone is engaged in pursuing tough improvement targets that are aligned to serving customers - makes for a revolution in management. Many managers, unfortunately, slip into disbelief - it cannot happen!



Figure 1: Quality-based Management at three levels

Do we have the right objectives and their corresponding indicators? And what are the sources of these objectives? Quality forces us to ask these questions. It improves our capability to fix the right objectives, devise robust indicators, and set difficult but necessary targets. Superior results ensue. Here is an example of choosing the right indicator. Carbon dioxide emissions may be a worry at the global or national level. But to a company's operations, this may be a far-fetched indicator. More meaningful could be energy (in physical units) per equivalent output or value-add. Other measures could be pollution of all types and specific water consumption. When deployed, indicators are picked to address the means, and so they change in character and are not mere repetitions at smaller scales. The cascading process stops when it hits well-designed improvement projects.

In short, Quality helps decide what is to be achieved and why, followed by how and by whom (at every level) and by when. The value of such clarity should not be underestimated.

The International Academy for Quality has put out a White Paper on How Companies can Apply Quality to Tackle Planet Earth Concerns. See [How Companies can Apply Quality to Address Pla.pdf \(wsimg.com\)](#)

This IAQ White Paper features a table showing three levels – operational, strategic, and holistic – of managing sustainability. The table sets out the status of the organization at each level, and the quality methods that would likely be used. Figure 2 is an adapted version.

Stage	Status	Quality Methods
<b>Awareness</b> - Operational Sustainability	<ul style="list-style-type: none"> <li>Understand that apparent contradiction between sustainability and profitability may be false</li> <li>Start to reduce harm within the organization</li> </ul>	<ul style="list-style-type: none"> <li>Set some environmental goals</li> <li>Some improvement projects including Lean principles - for energy reduction, pollution avoidance..</li> </ul>
<b>Adoption</b> - Strategic sustainability	<ul style="list-style-type: none"> <li>Incorporate sustainability in Mission/Vision</li> <li>Efforts to reduce harm within and to a degree in inputs and product life and disposal</li> <li>Possible linking to UN Global Compact and SDGs</li> </ul>	<ul style="list-style-type: none"> <li>Sustainability objectives in Policy Management - such as carbon neutrality, water positiveness</li> <li>Strong TPM/Lean activities for waste elimination</li> <li>Product choices and designs move towards greater sustainability</li> </ul>
<b>Achievement</b> - Holistic Sustainability	<ul style="list-style-type: none"> <li>Primary company value</li> <li>Sustainability covers input materials, operations, and product use and disposal</li> <li>Design of buildings, machines, own generation of renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>Sustainability naturally incorporated in product development, operations and material/supplier selection, integrated with quality assurance</li> <li>Capability built up through accumulation of improvement projects</li> <li>Sustainability goals a natural part of everyone's role template</li> </ul>

Figure 2: Three stages of applying Quality to meet environmental concerns

At the holistic level, the environmental requirements of a product would no longer be treated as external to quality but as an intrinsic part of it.

In designing any product, its sustainability elements can be classified in a standard way:

- Toxins as well as GHG emissions released during use and disposal
- The extent of use of renewable and non-renewable resources
- Recyclability of all forms (reuse, up- or down-cycling, remanufacturing, re-assembling and upgrading)

These topics should be treated as part of quality dimensions and become inputs into Quality Function Deployment. Quality is at its strongest in new product development activity.

By regarding the resolution of sustainability issues of a product as quality objectives, we can create products of real value to making the planet more liveable for everyone. At least, we can minimize harm.

It is time Quality becomes a leading partner in assuring the Health of Planet Earth (HoPE). Quality is essential to sustainability. Without Quality there can be no hope for HoPE.



**N. Ramanathan**  
IAQ - Board of  
Trustees

INDEPENDENT | INDEPEN  
SELF-SUPPORTED | SELF-  
NON-PROFIT | NON-PROF  
NON-GOVERNMENTAL | N  
ORGANIZATION | ORGANI  
INDEPENDENT | INDEPEN  
SELF-SUPPORTED | SELF-  
NON-PROFIT | NON-PROF  
NON-GOVERNMENTAL | N  
ORGANIZATION | ORGANI  
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SELF-SUPPORTED | SELF-  
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ORGANIZATION | ORGANI



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