



IAQ Quarterly Newsletter

Oct 2021 - Dec 2021

#IAQ/2021/04





IAQ Think Tanks (TT) are active working research groups created for the analysis of issues focused on specific quality areas and dedicated to consideration and advocacy of alternative approaches for the future development of their focus areas.

TTs allow participants an opportunity to reflect on significant issues without the need to deal with daily issues of operations and decision-making. Think Tanks are most effective when they challenge policy orthodoxy and provide innovative direction to shape emerging problems to help determine future directions. TTs need to define the role of quality in each of these areas with a focus on bringing knowledge and creating useful outputs.





From the Chair

Dear IAQ Members,

First, let me announce and congratulate Dr. Noriaki Kano as the first Quality Laureate.

The citation reads:

“For innovation, application, and promotion of the Theory of Attractive Quality which has had extraordinarily profound application in dimensions of business, industry, healthcare, education, and government and provided an exceptionally meritorious contribution to the advancement of quality in the 20th Century and beyond.”

We are hoping that 2022 will give us opportunities to meet face to face again. We will plan to have a meeting in Anaheim on May 19-20, 2022. We are working on the agenda. If you have contacts with any company in the area that you think we should visit, please let me know at liz.keim@comcast.net.

We are also planning to have a meeting in Japan in the fall. Dates have not been set yet. EOQ is planning to hold its conference in October 2022 in Russia. The dates and city have not been determined at this point in time.

I wish you and your families a happy holiday season and a healthy 2022!



Best Regards,

Elizabeth M Keim
Chair of Board, IAQ





INDEX

**Quality in Statistical Engineering
Think Tank (QiSETT)**

Quality in Education Think Tank (QiETT)

Quality in Governance Think Tank (QiGTT)

**Quality in Planet Earth Concerns
Think Tank (QiPECTT)**

Voice of Customer Think Tank (VoCTT)

Quality in Logistics Think Tank (QiLTT)

**Accelerating Continual Improvement
Think Tank (CI²TT)**

Quality 4.0 Think Tank (Q^{4.0}TT)

Project HoPE - The Health of Planet Earth





Quality in Statistical Engineering Think Tank (QiSETT)

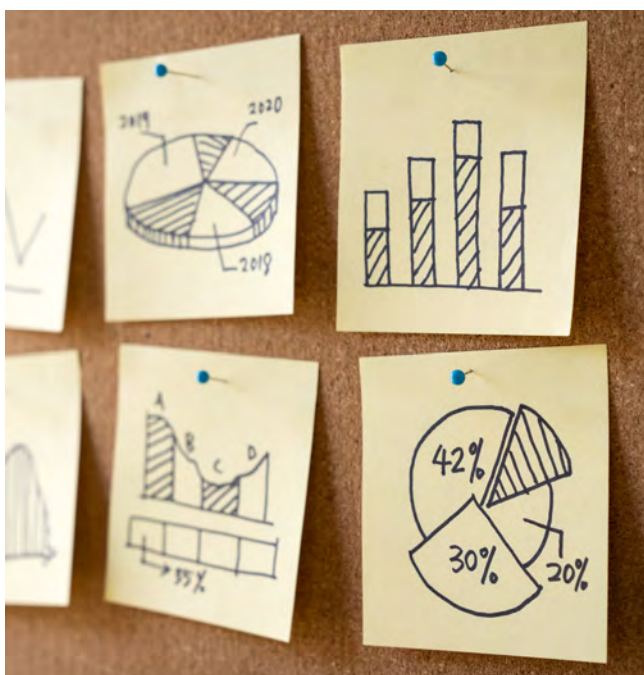
Geoff Vining
Chair

Ronald Does
Co-Chair



Started in 2017, an association called International Statistical Engineering Association already has 500+ members. Join the association and be a member free via the website www.isea-change.org.

Active and interested IAQ members in ISEA: Roger Hoerl, Ron Snee; Geoff Vining; Fugee Tsung; Doug Montgomery; Matthew Barsalou; Ram Ramanathan; Greg Watson; Jiju Antony; Blan Godfrey; Jamy Kovacs; Zhen He; Sung Park; Paolo Sampiao; Pedro Saraiva; Jan Shi and Ronald Does.



Highlights & Benefits:

- The Statistical Engineering handbook is now available to ISEA members on www.isea-change.org. To access the handbook, log in to your account by clicking on the person icon in the upper right corner of this page. A webinar to introduce the Handbook and explain it in more detail is available via the website.
- Three case studies have been documented. They are posted on the members-only page.
- A slide deck describing statistical engineering is available. Members are encouraged to use these slides to educate others on the benefits of statistical engineering.
- 2021 ISEA Online Summit on November 18-19 (9am – 2pm US Eastern Time)
 - Keynote Speaker: Dr Michael I. Jordan, Professor of Statistics & Computer Science, University of California Berkeley (Named "World's Most Influential Computer Scientist" in 2016 by Science journal)
 - A few Featured Speakers: Roger Hoerl, Union College; Christine Anderson-Cook, Los Alamos National Laboratory (Ret.); Willis Jensen, W.L Gore & Associates; Peter Parker, NASA Langley Research Center; Stefan Steiner, University of Waterloo





Quality in Education Think Tank (QiETT)

Pedro Saraiva

Chair

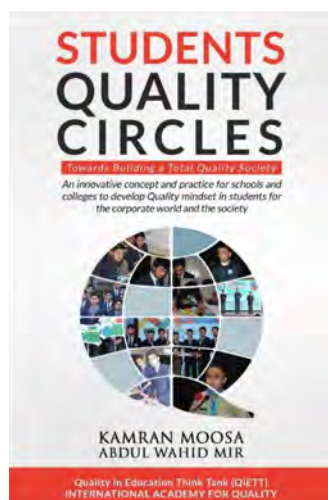
Beth Cudney

Co-Chair



The Quality in Education Think Tank (QiETT) currently has 21 members from 17 countries dedicated to the pursuit of quality in education. The QiETT has published 16 white papers to date, with more planned for publication this year. The white papers cover topics including K-12 education, higher education, and work force development and training.

In addition to white papers, the QiETT has been associated with the publication of two recent books, the first of which was *Students Quality Circles: Towards Building a Total Quality Society*



Students Quality Circles:
Towards Building a Total Quality Society

by Kamran Moosa and Abdul Wahid Mir. And the second one was *Practical Statistical Methods for Quality: Improving Products, Services, and Processes* by Matthew Barsalou



Practical Statistical Methods for Quality:
Improving Products, Services & Processes

Once sufficient white paper material is available, the QiETT will be publishing the white papers in the form of a third book.

Due to the ongoing pandemic, QiETT has not held a face-to-face meeting since fall 2019. However, the QiETT has held five online meetings this year and intends to hold a face-to-face meeting in conjunction with an international quality conference in 2022, assuming it is safe to do so.

In such meetings, besides updating the progress made in its eight clusters of ongoing activities, QiETT members or guest speakers have been addressing a variety of topics related to Quality in Education.





Quality in Governance Think Tank (QIGTT)



Raul Molteni
Chair



A recognized field in which quality principles, applied in environments of high degree of uncertainty and technological evolution, are analyzed, defined and promoted in, and from, the Governance of an organization, and as a key factor to facilitate its sustainability.

QIGTT is there to find out Insights on future corporate governance objectives, accountability, organization and best practices due to technology, social, environmental, economic, business and globalization evolution and innovation.

To analyze, promote and implement Quality concepts, methods and tools in corporate governance as a key factor for maintaining the interests of all stakeholders, sustainability, ethics, and efficiency as a focus of attention. Contribute to the practice of Governance in all spheres, but particularly:

- (i) in public and private corporations
- (ii) through effective application of quality concepts
- (iii) for equitable and sustainable economic development
- (iv) without causing harm to the environment.

Several papers and books are also published to make Quality methods and tools applied to Boards.

Future in Corporate Governance Project.

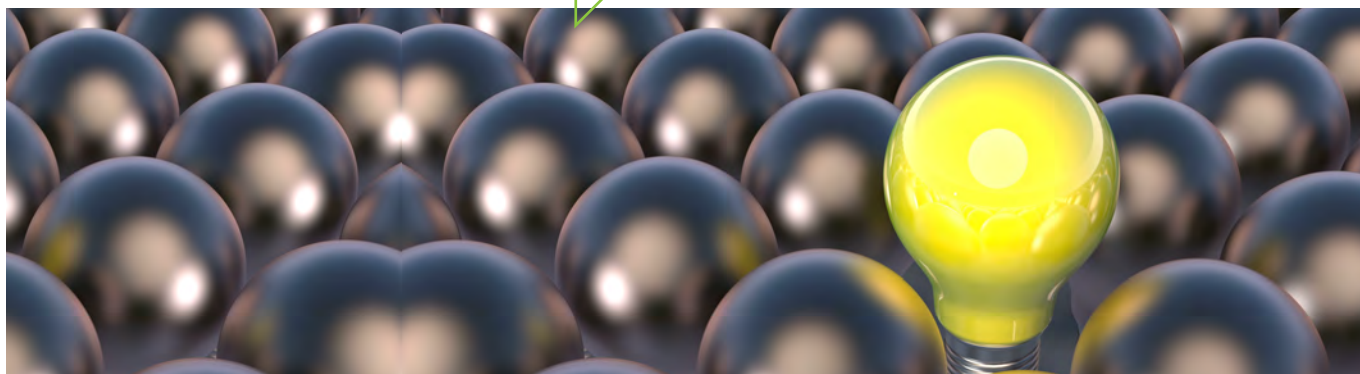
To find out Insights on future corporate governance objectives, accountability, organization and best practices due to technology, social, environmental, economic, business and globalization evolution and innovation.

Questions we try to respond: Are current board practices still effective and efficient enough? Should any be changed, interrupted or added? A document containing insights and suggestions will be shared with

- (i) those who have participated,
- (ii) the members of co-organizing organizations,
- (iii) participants and organizations of the other 2 international workshops and
- (iv) other international entities such as the International Financial Corporation (IFC).

Members are professionals from the Quality and Finance fields, from Europe, North America, South America and Asia. We are convinced that Quality principles, methods and tools bring clear benefits to the functioning of governing bodies.

Academicians Elizabeth Cudney, Blanton Godfrey, Enrique Sierra, Glenn H. Mazur, Gregory H. Watson, Hiroshi Osada, Hugo Strachan, Jamison V. Kovach, Javier Negri, Liu Zhouhui, Marcos E. J. Bertin (Past Chairman), Mary Jean Ryan, Miroslav Drijaca and Raúl Molteni (Chairman).



Quality in Planet Earth Concerns Think Tank (QiPECTT)

Willy Vandenbrande
Chair

Sunil Sinha
Vice-Chair



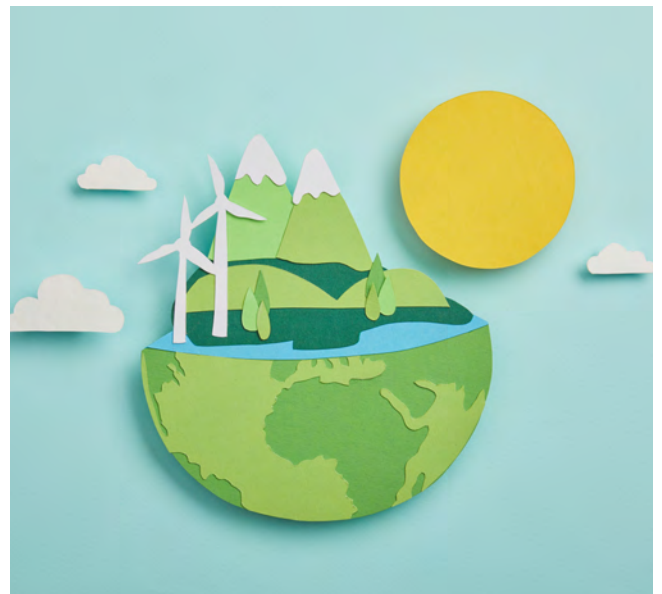
"Bring planet earth concerns to the mainstream of Quality Management & introduce Quality Management into Planet Earth Concerns"



The Think Tank works on the process for meeting human communities needs and respective goals in coexistence with ecosystems through sustaining the ability of natural systems to continue to provide the resources upon which the social and economic development depend. Social and economic sustainability should be in harmony with environmental sustainability, that is the exploiting rate of natural systems should not exceed their regenerative capability.

In this context, QiPECTT will work according to the following principles:

- **In line with the IAQ Mission**
The QiPECTT stresses on "Quality for Humanity" and "Compassion for all living beings" in accordance with the IAQ Mission.



- **Using quality management principles, methods and techniques**
The QiPECTT adopts the guidelines described in the IAQ Quality Manifesto and will use the rich heritage of theoretical knowledge and practical application of quality management contained in the quality body of knowledge (QBoK) to tackle planet Earth concerns, within a balanced model of the three dimensions of sustainability.
- **Focussing on organizations**
Recognizing that all stakeholders should play a part in making our environment and societies more sustainable, the QiPECTT will focus on helping organizations to increase their contributions to a more sustainable planet.



The QSA 2021

Quality in Sustainability Award 2021 was organized for the second time by QiPECTT. Twelve projects were withheld for this session, selected with the help of our partners ISQ (India), CQA (China) and SIQ (Sweden). It was a very interesting day with many great examples showing the power of quality management in achieving sustainability results.

The jury had a very hard task and announced two projects as winners:



“The development and application of high reliability CF fuel assembly based on innovative quality management”
from the Nuclear Power institute of China



“Renewal and Re-use of Non-usable waste for Sustainability”
SRF Packaging Films Business, India.

Congratulations, not only to the winners but to all that participated and in that way contributed to a more sustainable planet.





Voice of Customer Think Tank (VoCTT)

Glenn Mazur
Chair



IAQ President Mr. Sasaki launched his May 2021 Inaugural Address with a powerful reminder of the importance of satisfying the Voice of the Customer in some of the leading companies in Japan and elsewhere. Encouraged by this, we are pleased to launch the new IAQ Voice of Customer Think Tank to further explore and disseminate modern tools and techniques to enable organizations to better understand their customers, constituents, and other stakeholders.

We quality professionals, of course, recognize that voice of customer has been the focal point of Quality Function Deployment (QFD) developed by the late Drs. Shigeru Mizuno and Yoji Akao, both of whom were IAQ Honorary Academicians. QFD roots go back to the 1960s when Bridgestone Tire first reported on using the method to drive market research into tire design and assure quality of critical customer needs in the tire building process.

In 1983, QFD was introduced into the West through articles in ASQ's Quality Progress magazine and seminars attended by IAQ Academician Bob King and others.



In 2010, the International Organization for Standardization asked me to convene a Working Group to write an 8-part ISO 16355 for QFD, the first part published in 2015. To date, 7 of the 8 parts are published with the final part on QFD for Digitalized Products currently under draft.

The Voice of Customer Think Tank is planning to use the pioneering work of Mizuno, Akao, King, and the ISO standard to consolidate global best practices into easy-to-implement guides with varying degrees of options depending on the organization and its products and services.

The VoCTT has established a vision statement for 2024 to be recognized by marketing, technical, and operational researchers and practitioners as leading resource on Voice of Customer.

Associated missions include:

- A. Provide framework for identifying, acquiring, and analyzing customer voices.
- B. Build a reference and resource bank about VoC research and applications.
- C. Identify missing or new areas to explore VoC.
- D. Publish 2-3 papers on achievements.

VoCTT members include both these active and support members: Glenn Mazur, Beth Cudney, Anil Sachdev, David Hutchins, Benson Tendler, Catherine Chan, Hesam Aref Kashfi, Kim Stansfield, and You Jianxin.





Quality in Logistics Think Tank (QiLTT)

Miroslav Drljača
Chair

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



Logistics is an activity that deals with mastering space and time at the optimal costs. In modern conditions, it is most often used to denote a business function and a scientific discipline that deals with the coordination of all movements of materials, products and goods in physical, informational and organizational terms. The circular process from procurement through production and sales to consumers. However, the story with the supply chains (SC) taking place does not end there. The modern approach 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 & harmlessly.

Logistics is a very broad area and has a complex structure: supply chains, procurement, production, storage, distribution, retail, traffic and transport, reverse logistics, waste management, cost management, organization, information management, circular economy, Human resources management, quality management, safety management, risk management, etc.

Quality as a science, as a business philosophy, a pragmatic approach and a way of life, is particularly important for every structural element of logistics. „IAQ Quality in Logistics TT" fully respects and is in line with the purpose of IAQ and is based on the core values of IAQ. Advocating for the application of UN Global Compact principles and connection to UN Sustainability Development Goals. As an organization that brings together eminent world experts in the field of management systems and other areas, as well as areas within logistics, IAQ-QiLTT can offer innovative quality solutions that will contribute to the quality of life for all people on the planet.



Accelerating Continual Improvement Think Tank (CI²TT)

Lars Sörqvist
Chair



Gregory H. Watson
Co-Chair

Purpose:

Develop an improved methodology for structured analysis of performance issues in both product and service deliverables as well as the end-to-end processes that produce them. The focus areas for this IAQ Think Tank are on development of standard mental models and modernizing the analytical methods that are used to support these models so they are aligned with the current maturity level of quality thinking.

History:

The CI² Think Tank was established in 2014 in response to a request from the European Organization for Quality that IAQ conduct an inquiry into the standardization of the Lean Six Sigma methodology that could be applied for their personal registration scheme.

Investigation of the methods applied in both teaching and applying this methodology it was evident that not only was there no standard method for structured problem-solving but that many academic disciplines developed their own mental models for the same process; however, these models all tended to apply the same set of analytical tools for the conduct of their inquiries.



Thus, the charter changed from standardizing the a method to the development of a common structured approach for continual improvement that would accelerate its adaptation across all industries, sectors, professions, and cultures.

After development and publication of the Continual Improvement Process model in 2017, application of the model through the International Trade Center's Global Quality Program was conducted during 2017-2019 in the following African nations: The Gambia, Kenya, Tanzania, Rwanda, Uganda, Burundi, and Ethiopia as a second phase. During 2022 a third phase of this think tank program will commence focused on upgrading the analytical tools applied based on the pragmatic lessons learned.

Academicians:

Bjorn Andersen, Jeroen De Mast, Tani Järvinen, Markku Nieminen, Paulo Sampaio, Pedro Saraiva, Lars Sörqvist, and Gregory H. Watson.

Past-Deliverables:

- Final Think Tank Report of Phase 1: May 2017
- IAQ Report, Continual Improvement Process Model, 2017
- Final Think Tank Report of Phase 2: May 2019

Future Plans:

The CI² Think Tank is now soliciting Academicians to participate in the third phase of its work which will be conducted in two increments. In the first updated methods for risk and failure analysis, exploratory data analysis, and causal inquiry will be developed and published as academic papers.

During the second increment, the work of the CI² Think Tank will be merged with that of the Quality4.0 Think Tank to define approaches for incorporation of methods using Big Data analytics, Artificial Intelligence (AI), Machine Learning (ML), and Artificial Neural Networks (ANN) into the overall CI² process model for both analysis of issues and innovation for products, services and processes.



Quality 4.0 Think Tank (Q^{4.0}TT)



Gregory H. Watson
Chair

Pedro M. Saraiva
Vice-Chair
(Engineering Technology Focus Area)



**Narayanan “Ram”
Ramanathan,**
(Humanized Technology Focus Area)

Purpose:

In the disruptive era of Quality 4.0 this IAQ Think Tank seeks to develop clear understanding of the methodologies, applications, and implications of digital technologies on the methods, tools, and practices of quality as well as its implications for specialists who engage in this profession and are developing their personal competencies for future application [additional detail is cited in the Think Tank’s Terms of Reference].

History:

Quality 4.0 has developed into a technology-based movement within the global quality community to discover pragmatic meaning as the term was first mentioned in 2016 in the context of the German national initiative called “Industry 4.0.”

However, currently there is no agreed meaning in the quality community which, in general, is unprepared to widely embrace a digital framework for production as it has the potential to displace the traditional structure of organizations and upset the long-standing roles of quality professionals. This Think Tank is proposed to develop a framework that enables the global quality community to understand the nature of this digital transformation which is currently being imposed on industry as a result of “technology-push” advances and combined

marketing capabilities of purveyors of related technologies by the major consulting companies that seek to assist in introducing and implementing this transformation (e.g., McKinsey and Boston Consulting Group are in the process of developing major consultancies around this topic).

The IAQ Quality 4.0 Think Tank was established in May 2021 to serve as a clearinghouse for development of the professional practices of the global quality community as it integrates advanced technologies and incorporates these challenges into the design of quality systems that are suited for the 21st Century.

Membership:

- Core Team Academicians: James E. Duarte, Markku T. Nieminen, Hiroshi Osada, Nicole M. Radziwill, J. Ravikant, Benson Tendler, and Fugee Tsung.
- Extended Team Academicians: Jiju Antony, Matthew A. Barsalou, Joseph A. DeFeo, Zhen He, David Hutchins, Jorge Romàn, Paulo A. Sampaio, and Ngo Van Nhon.
- External Invitees: Zubair Anwar (ASQ), Mike Turner (CQI), and Vipin Sahni (CII)

Past-Deliverables:

- Develop a draft Terms of Reference and forward to the IAQ Board of Trustees for review.
- Publish an IAQ Statement on Quality 4.0, 14 June 2021.
- IAQ Board of Trustees approved the Terms of Reference for this Think Tank in July 2021.
- Publish Quality 4.0 Frequently Asked Questions, 10 September 2021.

Future Plans:

- Prepare IAQ Position Paper, “Surviving the Disruption of Digitalization.”
- Prepare IAQ Position Paper, “Technical Advances Leading to Quality 4.0.”
- Develop a Webinar series with basic introductions to the new digital methods and referencing recommended programs for further study.



Project HoPE – The Health of Planet Earth



**Narayanan “Ram”
Ramanathan,**

Co-Chair



Gregory H. Watson

Co-Chair

Purpose:

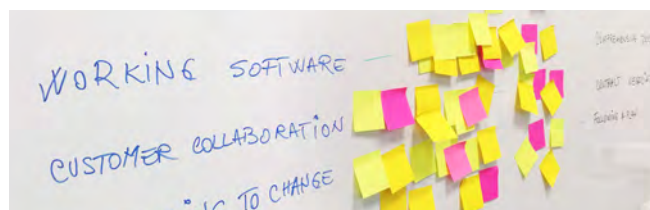
This activity was initiated at the request of the IAQ Board of Trustees in 2019 as a desire to update the Quality Manifesto for the 21st Century. The previous Quality Manifesto was almost two decades old and did not comprehend the turbulence caused by digitalization and the impact that global heating had on the environment. This spin-off of the IAQ Quality in Planet Earth Concerns Think Tank was chartered to develop a revised Quality Manifesto for the 21st Century; communicate the Quality Manifesto within the global quality community; and extend its deployment globally.

History:

The first of Project HoPE was completed with the publication of an IAQ Point Paper describing the need and the current situation and presenting the Quality Manifesto for consideration by the IAQ Executive. In May 2021, the IAQ Board of Trustees approved the Quality Manifesto and in June global deployment of the quality policies and strategic intent of the manifesto commenced.

Since that time quality groups from Chile to China, Australia to Sweden, and from Kenya to the United Kingdom have joined in a global discussion of the ten principles & published them to their members. Translations have been made into many languages: Russian, Mandarin, Korean, Hungarian, Portuguese, Croatian, & many more. This effort continues into 2022 with an objective of obtaining the support of all national & regional quality organizations in the world & branching out to aligned professional organizations.

The first of these to join in endorsing the Global Quality Manifesto was endorsement of the American Statistical Association (ASA) which occurred in November 2021. Further promotion and propagation of the Manifesto is also planned for the remainder of 2021 and 2022. During 2022 this effort will shift into a coordinated plan to deploy these principles into a coherent plan of action for the benefit of Planet Earth in a collaboration with like-minded organizations and individuals.



Academicians:

Marcos E. J. Bertin, Kenneth E. Case, John R. Dew, Miroslav Drljača, Roger W. Hoerl, Hesam Aref Kashfi, Elizabeth M. Keim, Janak Mehta, Pal Molnar, Raúl F. Molteni, Kamran Moosa, Juan Javier Negri, Sr. Mary Jean Ryan, Pedro M. Saraiva, Ronald D. Snee, Hugo R. Strachan, Willy Vandenbrande, and Guangyao Yu.

Past-Deliverables:

- Publish IAQ Position Paper: Narayanan “Ram” Ramanathan and Gregory H. Watson, “Revitalizing the Quality Manifesto for the 21st Century,” 24 February 2021.
- IAQ Board of Trustees Approval, “The Quality Manifesto for the 21st Century,” 18 May 2021.

Future Plans:

- Seeking endorsements and translations of the Quality Manifesto document by all global quality organizations and gaining supporting endorsements from aligned professional organizations.
- Communicating the content of the Quality Manifesto at conferences for quality organizations in all regional areas.
- Developing a deployment plan to engage in actions that move the Quality Manifesto from being a policy paper full of principles into an action plan to accomplish a change agenda.





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