QB

qualitybusiness®

ISSUE 1 2022 | FEATURING:

- *The Future of Quality is Now – Qualcon 2021*
- *Conference Overview Stream – Rapporteur Overview*
- *Reimagining the Future of Leadership: Building Human-Centered, Intelligent Organisations*
- AND MORE…

NEW ZEALAND ORGANISATION FOR QUALITY INC AUSTRALIAN ORGANISATION FOR QUALITY LTD

In the Q

Welcome to the first issue of Quality Business for 2022! This bumper issue is dedicated to content from the APQO-Qualcon® 2021 conference, hosted by AOQ in October – November last year.

This was an innovative event, held fully digitally due to the complications around COVID-19. Feedback from participants highlights that what they really appreciated was the ability to watch presentations in any order, when they liked, and to replay at will.

The Conference Organising Committee has prepared a substantial report which captures the key steps in the journey of organising this conference and the lessons we learned along the way, to serve as a reference handbook for future conferences. This has already proved invaluable for the President of APQO as she plans this year's APQO Conference.

What delegates also appreciated just as much as the was the amazingly rich content available – about 60 presentations including Keynotes organised into five Streams: an Overview stream on the conference theme of 'The Future of Quality is NOW!' and Streams on Rethinking Customers and Other Relationships, Rethinking Processes, Rethinking Excellence, and Rethinking Leadership and People.

Each of the five streams was wrapped up by a Rapporteur who gave a thoughtful and critical summary of the stream and its highlights. They have each kindly prepared an article from their presentation. If you read these articles – the first five in this issue – you'll get a good feel for the richness of the conference content.

Gus McMillan from New Zealand was the registrant who watched the most content. He shares his thoughts in a short article following this editorial.

Following the rapporteurs' papers, we have six articles selected from the most popular presentations.

The next issue of Quality Business (in May) will contain a second tranche of conference articles, including conference articles relating to the topic of Accreditation in recognition of World Accreditation Day (on 9 June). We look forward to James Galloway's (JAS-ANZ CEO) keynote presentation headlining this content.

To round out this issue we have an account of the new Juran Medallists from AOQ, and the regular columns from AOQ and NZOQ to keep us up to date with happenings.

Dan Forsman
Co-editor, Quality Business
NZOQ Director-in-residence

Dr Martin Andrew
Co-editor, Quality Business
Director Australian Organisation for Quality Ltd

Quality Business is a quarterly magazine distributed to the quality community in New Zealand, Australia and internationally. Quality Business is published by the New Zealand Organisation for Quality (NZOQ) and the Australian Organisation for Quality (AOQ). Available online.

QB Team

Editors	Martin Andrew - AOQ Dan Forsman - NZOQ
Design	Chris Hunt The Design School Palmerston North NZ.
Final Proof reader	Phillip Richardson FAOQ - JM

ISSN 2463-5286 Print
ISSN 2463-5294 Digital

AOQ President

Maree Stuart president@aoq.net.au

NZOQ President

Abraham Fenn president@nzoq.org.nz

QB General Enquiries

AUSTRALIA
Australian Organisation for Quality Ltd
PO Box 7149, Upper Ferntree Gully VIC 3156 AUSTRALIA

Telephone +61 1800 725 850
Email admin@aoq.net.au

NEW ZEALAND
New Zealand Organisation for Quality Inc
PO Box 622
Palmerston North 4440

Telephone +64 6 351 4407
Email quality@nzoq.org.nz

QB Advertising

We welcome advertising and rates are available on request. Please contact media@nzoq.org.nz (New Zealand) or admin@aoq.net.au (Australia) for more information.

qualitybusiness *In this issue:*

The Future of Quality is Now – Qualcon 2021

Gus McMillan
Quality Manager
Lockheed Martin NZ

Gus McMillan joined Lockheed Martin in 2011 and is the Quality Manager for Lockheed Martin NZ (LMNZ) where he is responsible for the Quality Management of Lockheed Martin NZ Logistics and Training contracts. This followed 7 years with NZ Post where he held positions as Quality and ESH Manager for the Datamail group of companies. Prior to Datamail he worked within the automotive industry for 15 years as a senior manager dealing with general public and automotive industry developing, implementing and auditing quality management systems and additionally was involved with review of regulations and policy with various Government agencies.

Gus is qualified as an ISO 9001 Lead Auditor and Lean Six Sigma Blackbelt, currently responsible for the delivery of quality training for LMNZ and has previously delivered Quality Management Systems training for the automotive industry throughout New Zealand.

Away from work Gus spends his personal time as a sports administrator and was recognised as the Sport Wellington Volunteer of Year in 2008 and is also a Motorsport NZ Steward receiving a Distinguished Service Award from this organisation for his services in 2018.

EDITOR'S NOTE

Gus watched more APQO-Qualcon 2021 content than anyone else! So we invited him to share his impressions of the conference.

The registration flyer promoted that the conference program would bring the conference theme to life and would deliver an experience to remember for delegates – one in which you would be challenged, educated, and intrigued by exploring, with delegates from across the Asia-Pacific, the Future of Quality.

Within the pre-conference flyer comments from an attendee from of a previous 2016 Qualcon identified, "It was difficult to choose between all the excellent topics on offer, I would highly recommend taking advantage of attending Qualcon." With the 2021 conference being in a virtual format, it enabled participants the opportunity to attend all topics on offer and represented excellent value for money.

All the Qualcon 2021 presentations reinforced the belief that change is necessary and therefore the Future of Quality is Now. The presentation on Rethinking Deming was extremely thought provoking.

STREAM 1 - RETHINKING CUSTOMERS AND RELATIONSHIPS:

Explored innovation to address customer requirements. Quality principles that reduce the cost of failure and use of technology to enhance customer satisfaction.

STREAM 2 - RETHINKING PROCESSES:

COVID-19 has accelerated digital transformation effort across organisations globally. Even implementing the basics of 5S methodology in a hybrid workplace is more important than ever.

STREAM 3 - RETHINKING EXCELLENCE:

Explored common ideas, was thought provoking with case studies and explored the use of technology.

STREAM 4 - RETHINKING LEADERSHIP AND PEOPLE:

Presented ideas around Leadership and People with selflessness, empathy to emotional intelligence, vision, drive and purpose, ability to embrace change, nurturing, integrity and communication making up key components.

Conclusion: The virtual format of Qualcon 2021 was an excellent opportunity as quality professionals to refresh knowledge of established quality practices and continuously challenge ourselves to look at new methodologies which enhance quality deliverables.

I would also highly recommend taking the opportunity of the free '12 Days to Deming' self-learning course available on the NZOQ/AOQ websites.

SHARE Q

Conference Overview Stream – Rapporteur Overview

Craig Ottaway
E: craig.ottaway@internode.on.net
P: 0412799009

Craig Ottaway JM is presently employed as Operations Manager at GDLS-Australia.

He has more than 29 years of experience in various trade and senior positions in the Defence industry and a further 12 years in Automotive and Consulting. He continues to lead Audits activities in both GDLS-A and their Supplier base and Industry to identify and drive improvements. Craig enjoys diversifying his role by tackling new challenges and continually learning through practical experiences and formal education. Original a fitter and turner by trade, Craig has an MBA from the University of South Australia and is currently undertaking a Graduate Certificate in Asset Management.

Craig has been directly involved with AOQ at Council and Board level and delivering Qualcon® Conferences for over 18 years. He is inspired by the new pool or talented professionals entering leadership roles within the Organisation. He was very excited by the delivery of the recent Qualcon / APQO 2021 Conference – the first one he has not been involved in organising for many years.

Having had the opportunity to be involved for many years with AOQ and the honour serving as State and National President and Chair, I was again honoured to be invited to present the summation of the Conference Overview Stream 'Context of the conference theme' at the APQO-Qualcon 2021 Conference.

Firstly, I wish to extend my congratulations and appreciation to the Conference Organising Committee for their foresight and management of risk in delivering a digital Conference available across the globe. This Conference will surely set a benchmark. The digital conference environment provides an opportunity to watch the presentations more than once. I found this a great benefit to gaining a deeper understanding the subtle messages of the speakers.

The appetising Theme for the conference – **'The Future of Quality is Now'** – immediately starts one considering what the future may hold.

It is worth noting that this Stream provided us with a distinguished line up: three former ASQ Chairs (one of whom is also an AOQ Fellow, and two of whom are current or recent Members of the APQO Core Council) and one former NZOQ Chair.

We were presented with a diversity of thinking that explored many aspects relating the context of the Conference theme '*The Future of Quality is* Now', and how they align. This Theme, and in particular the subjects presented, sends a very powerful message that quality professionals must consider the past and its lessons, and apply these lessons into the future, to enable them to prepare for new and extended roles. This will require education and professional development in both thinking and skills.

The key points at least touched on by each of the Presenters in this Stream included:

- An unintended common thread related to people welfare in several different forms.
- Change is upon us and is required now and into the future. Hence change was a clear theme in this Stream - not surprisingly given that that reference to 'future' implies change. Russell Veitch provided a contrasting argument and a critique of 'Fads'.
- Preparing for change – Quality 4.0 aligns with important considerations around Industry 4.0, climate impacts, renewable energy, digitalisation, standards and assessment, economies and employment.
- The Future of Quality and the outlook for quality professionals is bright; and
- Change will require a change in thinking and approach.

Keynote presenter **Dr Gregory Watson** is an American now based in Finland who spent several years in Australia in a senior Quality Management role and is a Fellow of the AOQ; he is a past Chair of ASQ and is regarded as one the current 'gurus' in Quality globally. His messages were delivered with clarity and purpose: ***How do we get ourselves ready?****, and* ***Invest in yourself!*** He discussed digital transformation utilising his concept of tomorrow's Quality Professional. He clarified what Industrie 4.0 entails, and its relationship to Quality 4.0, and he explored the disruptive transitional period as we move towards it.

Gregory made interesting references to disruption and digital innovation (digitalisation). He related his own experiences and research in building knowledge, and his perspectives on data, and on the massive choices available for technology for each of which the application needs to be clearly understood. Who should be the gate keeper of this understanding? He determined that the Quality professional can be that gatekeeper. He suggest this is one of the futures for the today's traditional quality function. For example, it is the Quality professional who can become the person to review the 'AI' Algorithm's design and the selection of data used to develop it in order to offset any unintended bias built into the process – as 'quality' in AI includes there being an absence of unintended bias.

Gregory also explored a Key Challenge – a term from the Japanese "Hito-zukuri": the adaption and transition of the skills of workers being conducted with dignity, and utilising the unique skills of our profession. He introduced into his argument concepts such as the 'Understand-Document-Standardize-Optimize' (UDSO) Model to seek to understand the pathway to automation, and using the PDCA process to increase performance by subsequently improving work. He also touched on several other points in which quality professionals are uniquely qualified to act as trusted advisers to assist organisations to develop strategies to differentiate and position themselves, by understanding decision making processes, developing communication skills and communicating the value of Quality professionals to management.

Keynote presenter **Patricia La Londe** from the USA (and also a past Chair of ASQ and recent past Member of the APQO Core Council) discussed business adaptability in these current testing times, and the role Quality professionals may perform in the future. Patricia's key points included:

- The enabling quality principles: Adapt, Innovate, Focus on the Customer. She related these traits to learnings from her own childhood in which she was one of nine children, and she applied these traits to the future of the Earth and the cycle of life;
- Applying these traits in your business and using them to respond to COVID-19, to ensure your business is meeting both your customers' needs and your employees' needs;
- Changing your business and considering what the lessons are for this change, proposing that these must be extracted from all stakeholder perspectives and captured in an Enterprise Risk system;
- Asking "What can we do as Quality Professionals?" Answer: apply our quality skills to ensure there is a robust Quality policy and a Quality culture of customer focus.

Patricia posed this question to all of us! "What else can I do?**"** Patricia referred to Derreck Kayongo and his 'Six Seeks' in his closing Keynote at the ASQ World Conference on Quality and Improvement 2021 – "Don't seek Perfection; rather, seek Balance, seek Consistency, seek Justice, seek Passion, and seek a Cause for humanity".

Keynote presenter **Professor Nigel Grigg** from Massey University in New Zealand and past Chair of NZOQ has been a long time contributor to AOQ, APQO and our publications. He presented on the challenges relating to two kinds of Risk, namely 'Black Swans' and 'Grey Rhinos'. The former are Unforeseen/Unforeseeable risks; the latter are Foreseeable risks. Nigel discussed his current research in tools to manage risk, which are incorporated into his Quality / Value / Risk / Cost Model (Nigel recently published his model in *Quality Business* 2020, Issue 4, pp 8-10). He explored the question "What is Quality?" He made the interesting argument that for some people, Risk may be part of the value, e.g. in adventure tourism.

In his research, Nigel has noted the decoupling of Quality Management from process improvement. To support this position, he presented an interesting alignment of Process Improvement and Risk in Quality papers around key events since 1990. Nigel concluded that the impact/consequence of a risk event is larger than previously thought when relating to Supply Chains and pandemics and he showed how the model he has developed can be applied in many supply chains. I think this is an exciting and interesting piece of research; his Model is worth using as a simple and easy way to determine the costs of quality risk.

Keynote presenter **Dr James Galloway**, CEO of JAS-ANZ (the Joint Accreditation System for Australia and New Zealand), is also a long time contributor to and supporter of AOQ, and a frequent Keynote speaker at Qualcon® Conferences. Dr Galloway discussed where JAS-ANZ sits within the IAF (the International Accreditation Forum) and the services JAS-ANZ provides. He shared insights into the reasons why JAS-ANZ is ceasing the Auditor witnessing program – mainly due to its unreliability and the logistical challenges. James also referred to the two presentations at this Conference by **Kathryn Lockyer** (General Manager Services at JAS-ANZ) which examine aspects of this decision.

James went on to reinforce that Standard's objectives (that is, ISO 9000 standards are intended to help companies continually improve their products and services and consistently meet customer expectations) will be the same for Accreditation Systems and for Certification Assessment Bodies (CABs) and should include a common interest in '*user welfare'.* This put into context JAS-ANZ and IAF's review of the need for:

- Rethinking the assessment model to meet present day constraints on CABs and their customers, the community and other stakeholders and their interests.
- Rethinking delivery processes, which are now tired; reinvigorating old practices with new approaches that establish consistent outcomes and value for users.
- Rethinking Excellence, Leadership and People.

Dr Benito Flores from Mexico, another past Chair of ASQ and current Member of the APQO Core Council, presented with a natural passion for the quality profession, its individual professionals and how he envisages the transition of the traditional role of the quality professional.

Benito argued that Quality 4.0 can be a key input to managing business and achieving substantial improvement in performance and effectiveness. He provided insights into research he has

Continued from **page 05**

conducted on Quality and digital skills capability to enable the transition towards Quality 4.0. Benito's position is consistent with that in the Keynote delivered by **Dr Watson** (see above) about the importance of self-development in enabling change. Benito argued that Quality 4.0 has the most impact on manufacturing and R&D. He also thinks that it is most likely that business Executives will expect Quality professionals to have the most significant impact on the implementation of Quality 4.0. Benito expects that the new/emerging generation of Quality professionals will require enhanced 'soft skills' and that businesses and individual Quality professionals must start to develop these skills. The emphasis is for businesses and individuals to develop a plan to start small and build.

Dr Jackie Graham JM from Australia is a regular contributor to *Quality Business*, and a former Board member of AOQ. I take this opportunity to congratulate Jackie on recently being awarded the AOQ Juran Medal.

Jackie presented passionately an historical summary of Dr Deming's work and his teachings in Japan and the revolutionary impacts of his work including his 14 Points, PDSA (rather than PDCA) cycle and the Seven Deadly Diseases in America. Jackie provided further commentary on Dr Deming later in his life relating to his teachings on Profound Knowledge. (Jackie worked with Dr Deming for several years towards the end of his career).

Jackie related Deming's knowledge to current issues being faced by the planet and argued Deming's theories and concepts are still relevant and apply today, and by implication, into the future.

Jayet Moon from the USA is author of several recent articles in *Quality Business*. He presented several topics related to the teachings of Juran. I was drawn to the footage taken from an interview with Steve Jobs where the teachings of Juran were the subject in question. Steve Jobs answered by stating the issues that America were facing at that time, such as "Americans were so prosperous for so long they took too many things for granted" and they forgot how hard it was to make those things great such as a great education system and industry. He emphasised the need now is to go back to basics and relearn these skills in the areas of planning strategy and manufacturing. The point I felt was being made by Jayet is that arguably these issues are the same as those still being faced today.

I felt that a key part of his presentation was where Jayet addressed the question "Where does Quality and Risk Management meet?" This resonates with the Keynote delivered by **Nigel Grigg** and the presentation from **Jim Whiting** (below). Jayet referred to Juran's 'Quality Dykes' as a key risk management concept. He discussed the shortage of semi-conductor chips of nine months earlier which has had a significant impact on global manufacturing because the supply chain was based of the 'Just-In-Time' principles which broke down in the face of the global pandemic. If the 'Quality Dykes' thinking had been applied, the supply chain would not have been so brittle.

Jayet also discussed at a high level Juran's Quality Hierarchy and how it applied to risk associated with goals and objectives of the business.

Jim Whiting from Australia presented on the idea that Opportunity is not purely 'positive risk' (i.e. when you perform better than your objective's target) but is about deliberately creating positive outcomes. Positive outcomes are conceived through the process of ideation (the activity of forming ideas in the mind). Jim's key point – and I feel this is really important – is that Risk is focused on managing/minimising negative outcomes, in contrast to Opportunities which are about creating positive outcomes. To use a sporting analogy: teams succeed by playing to win, not by playing not to lose. Jim discussed at a high level the process of pursuing Opportunities as well as treating Risks and argued that exploring and maximising prospects cannot ignore the emergent risk factors associated with Opportunities related to prospects.

Russell Veitch JM from Australia presents Quality training courses developed with AOQ and is a frequent contributor to *Quality Business*. Russell was also recently awarded the AOQ Juran Medal and I take this opportunity to congratulate him on this. In his presentation he explained that Quality no longer lies only in the manufacturing domains and argues that the seven ISO Quality Principles are as relevant in business today as ever. (The seven Quality Principles are: Customer focus; Leadership; Engagement; Process approach; Improvement; Evidence based decisions and Relationship management). Russell discussed how the he applies these Principles to modern business and how they are applied within the management systems standards, such as ISO 9001 as one example.

Russell touched on aspects of Social Responsibility, which I consider an important principle; however, he left the door ajar to explore how Social Responsibility fits within the seven Quality Principles or the ISO Management Systems Standards and did not expand on these concepts.

Russell argued that the Quality Fundamentals remain the same today and the challenge of Quality Professionals is to create new knowledge so as to challenge old knowledge to demonstrate that it remains relevant and robust.

Kathryn Lockyer, General Manager Services at JAS-ANZ and based in New Zealand, built on the Keynote delivered by her colleague **Dr James Galloway** to unpack the proposed changes in delivery of Certification Assessment Body services to clients. Kathryn discussed challenges with the Remote Assessment model and also (as I understood it) challenged / questioned the merit of needing one business to audit another business to manage risk related to 'special requirements'. She believes this is where Certification Assessment Bodies can make changes to their own systems to encompass the needs of their clients in this area of quality risk.

Kathryn explored the current approach to 'non in person' audits and she a reviewed in detail the associated technology challenges, skills required and the need for data security. She built on the Keynote delivered by **Dr James Galloway** to unpack proposed changes in delivery of Certification services such as:

- The Remote Assessment model.
- Questioning business auditing business.
- Technology challenges, skills required and the need for data security.
- The need to tailor processes to meet the stakeholder's needs.
- Allow time for Product Deep Dives.
- Witnessing – which is an artificial construct and conducted a point in time.

In line with **James Galloway's** presentation, Kathryn discussed 'Evaluation of the Effectiveness of Audit' and finished her presentation with a very clear message being: *Survival…"Adaption to the world in front of us".*

Linbo Wang from China took a deep dive into the transition to industrialisation and digitalisation. She discussed what digitalisation means and explored some misconceptions. Linbo took us through a journey of the 'Ages' of industrialisation up to digitalisation and examined the symbiosis of the key features of the various Ages leading into the present social / economic form and on towards the age of digitalisation. She provided a clear summation of the past and touched on the opportunity for the future as per her Abstract - *…'this paper attempts to summarize and conclude the development characteristics of quality management in the new business mode, and looks forward to the future of quality from the perspective of grasping the present.'*

The presentation opened the way for Ms Wang to undertake a more comprehensive exploration of the opportunity related to the benefits of training for digitalization in the future of Quality. In my view this would have been a key highlight and I hope that the author can explore these areas in future research.

Suresh Prabhakaran from Australia was until recently AOQ's Perth Chapter Lead and has presented several national webinars for AOQ; he also volunteers as AOQ's nominee to Standards Australia committee ME-092-00-02 on operating integrity management for the petroleum, petrochemical and natural gas industries. Suresh discussed the increasing speed of change of the change process itself, and that there will be a continuous need for increasing the speed of production to provide a faster delivery of products and services to consumers especially as part of a green enhancement focus.

He explored this idea using as examples the emerging businesses of Hydrogen as a fuel (which is estimated to have an economic benefit of approximately $13 Trillion (but did not establish if this is globally or only in Australia and over what period of time) and Carbon Dioxide storage. Suresh presented very natural and sensible approaches to establishing clear barriers and safety critical elements for these industries as well as providing an overview of safety and processing / production standards. He set out the six key focus areas for production including Life Cycle Analysis.

CLOSING COMMENTS

Several topics within this Stream have the potential to be explored further. These include:

- What else can I do? & Invest in yourself!
- Change will require a change in thinking and approach, from a 'shop floor' mentality to thinking like a senior manager.
- Higher education and personal skill development needed to enable of quality professionals to transition to future roles.
- The emerging generation of Quality professionals will require enhanced 'soft skills'.
- Deming's theories and concepts are still relevant and need to be applied today to current issues being faced by the planet .
- Risk *vs* Opportunity: the focus on managing negative outcomes or creating positive outcomes.
- How Social Responsibility fits within the seven ISO Quality Principles and the ISO Management Systems Standards.
- The opportunity related to the benefits of training for digitalization in the future of Quality.

One idea not explored in this Stream was to examine the Theme in retrospect. Were there times in the past where Quality was at a 'fork in the road' and that the path taken changed the future of quality, and conversely what Quality might have become if other paths had been chosen. For example:

Deming and Juran clearly considered Quality to be the domain of top management with Quality Leads being part of the executive team. Yet today, that seems to be rarely the case; Quality professionals commonly are positioned low in the corporate hierarchy.

Quality has vacated a space now occupied by specialists: change management, risk, supply chain management, Lean and Six Sigma etc. Quality has been sidelined. How might that have been avoided?

The Speakers in this Overview Stream mostly touched on what the future could or may be, rather than mapping how the profession gets there and what the professional will need in the way of education and development to survive the transition to the future of quality.

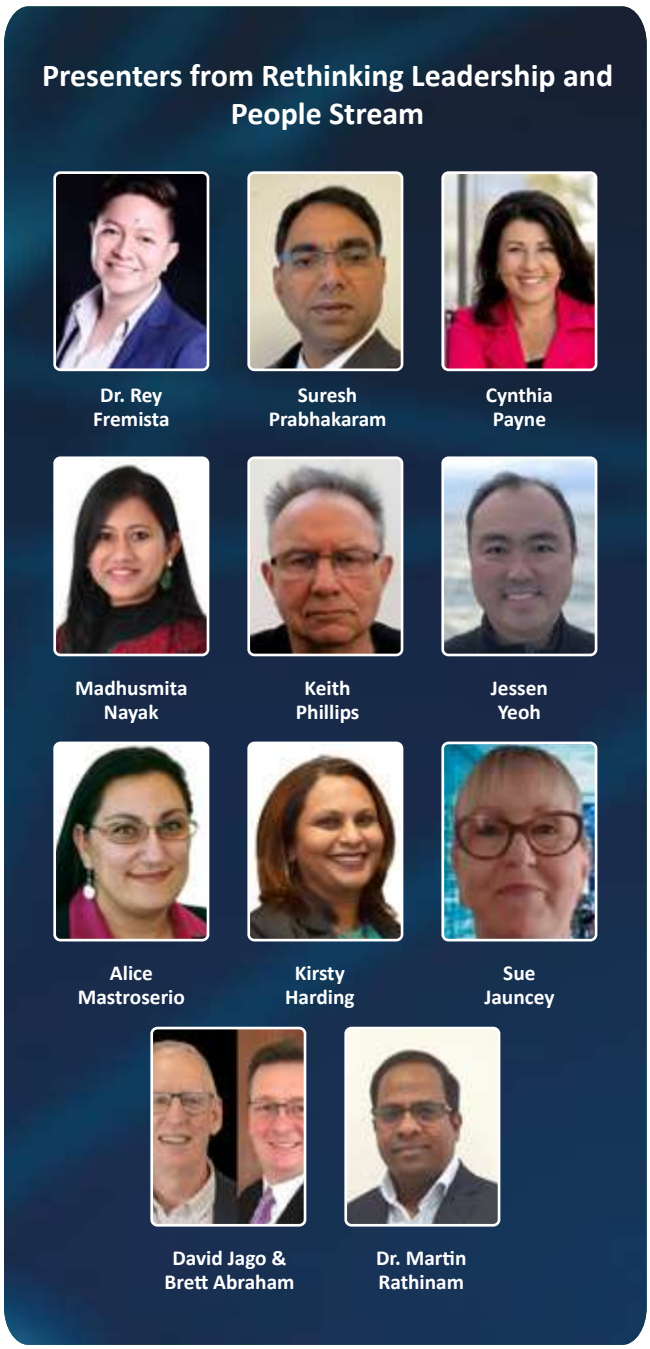
Nevertheless these presentations reinforced my belief that change is necessary and therefore "*The Future of Quality Is* Now".

SHARE Q

Rethinking Leadership and People Stream – Rapporteur's Overview

Matthew Rathinam *is a passionate public servant with a penchant for quality management, management innovation and business transformation. He has helped many organisations – private, global and government – to implement quality management and achieved ISO 9001 certification. Matthew has experience across many industries including engineering, automobile, pharmaceutical and railways. He has been a lecturer for Quality Management for Master's Degree students. He has a PhD in Management Innovation.*

This article provides the summary of the presentations from the 'Rethinking Leadership and People' Stream of the APQO-Qualcon 2021 conference. There were 11 presenters who shared profound knowledge and insights from their own experience to address the leadership challenges around engaging people in the modern world – a world in which organisations are facing unprecedented challenges due to advancement of technology and digital transformation.



I have tried to synthesise the key ideas presented under three topics: *Leadership challenges; Great leaders create leaders;* and *Rethinking people, conversation and culture.*

LEADERSHIP CHALLENGES TO DRIVE A TRANSFORMATIONAL CHANGE IN THE DIGITAL ERA

Everything around us is changing rapidly due to technological advancements such as Industry 4.0, digital transformation, or in some cases due to substandard quality of products and services. Few presenters articulated leadership challenges in this digital era.

Dr. Rey Fremista, President of Philippines Society for Quality, reimagined the future of leadership to create a human-centred intelligent organisation. It is not about knowledge-based intelligence anymore, it is about changing leadership style to suit the modern ways of working by creating the right environment, understanding the dynamics of interpersonal interactions and adopting the change quickly. The name of the game is agile; leaders should think fast, act fast. Importantly, all changes should be people-centric.

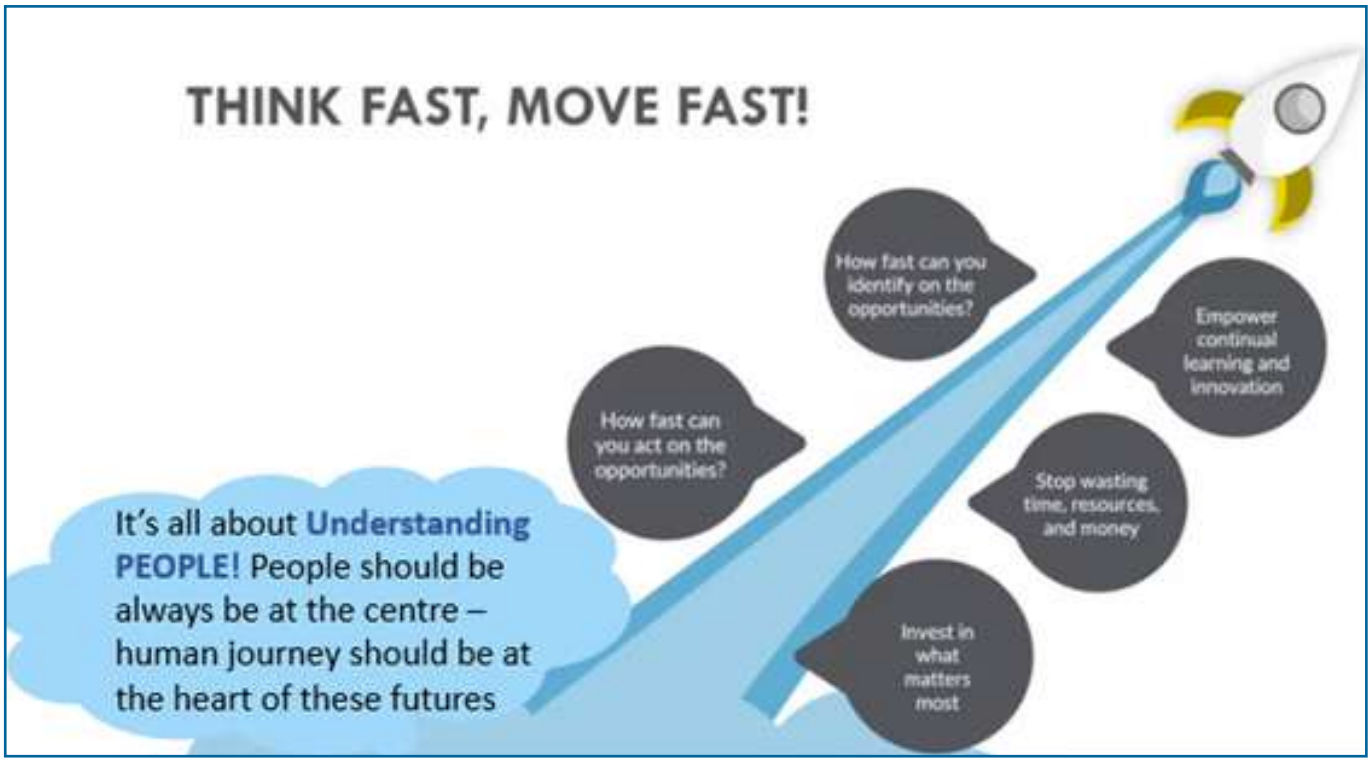


Image from Dr. Rey Fremista's Presentation.

Continued from **page 09**

Suresh Prabhakaram from Western Australia presented about unlocking the transformation journey through the lens of Industry 1.0 to industry 4.0, in comparison to Society 1.0 to Society 4.0, and how can we prepare and be part of Industry 5.0 and Society 5.0 in which the society becomes super smart through incorporating Artificial Intelligence, automation and smart technology. According to Suresh, the challenges to leaders will be social skills, safety and security, climate change, and an aging population. Quality leaders will be expected to nurture social life at work, focus on empathy and care, upskill employees to cope with a constantly modernising work environment, focus on employee well-being and mental health, and transform people in parallel with the technology transformation.

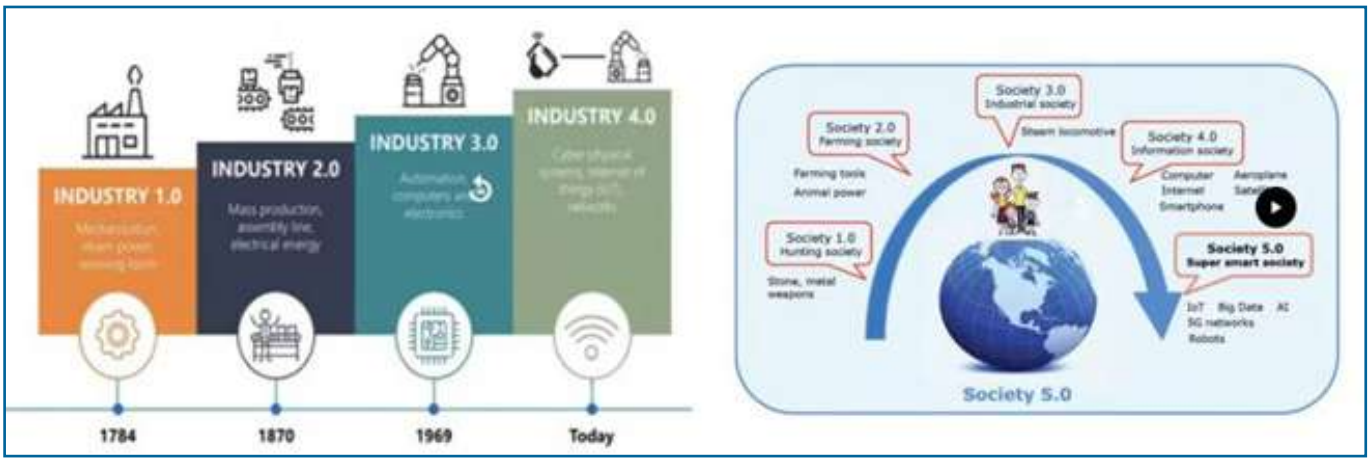


Image from Suresh Prabhakaram's Presentation.

Cynthia Payne, the Managing Director of Anchor Excellence, presented the need for a transformational change due to the Royal Commission into the substandard services in the Aged Care industry, the government's reform agenda and the new Aged Care Act. Collectively these put a lot of pressure on the leaders of the Aged Care industry. In addition to these drivers, the growing aging population in Australia is another reason why this industry needs a transformational change to improve the services and prepare for the future. Leaders are the heavy weightlifters of the transformational agenda. Cynthia highly recommends the Australian Business Excellence Framework as a tool to transform the current Aged Care industry into best practice. Other recommendations from Cynthia included that structure should serve the strategy, that the quality system be used as the first and second lines of defence, and that the importance of leadership behaviours be prioritised to drive transformational change. Cynthia also shared the following Risk and Governance Framework from Anchor Excellence.

1. Purpose Alignment	2. Segregation of Duties	3. Document Management	4. People & Culture	5. Operations
6. Periodic Assessment of Risk	7. Risk Mitigation / Minimisation	8. Techniques and Tools	9. Compliance Management	10. Consumers as Partners

Risk and Governance Framework Elements from Cynthia Payne's Presentation.

Madhusmita Nayak from Dubai presented on 'altrocentric' leadership, the opposite of 'egocentric' leadership. Altrocentric is the leadership required in the light of global megatrends such as globalisation 2.0, digital era, environmental crises, and technological convergence. She insisted that these challenges will push leaders to make transformational change focusing on employees' mental health and psychological safety, and there will be a laser focus on performance and transformation. Businesses will be hyper-connected with an agile mindset, purpose fuelled vision with not only vertical power but horizontal influence. Madhusmita recommends adopting the framework 'visualise, realise, mobilise and catalyse' to make a transformational change to quality management. Furthermore, she suggested that robots and Artificial Intelligent take over the mundane tasks, allowing the Altrocentric leaders to focus on people. Altrocentric leaders are intellectually curious and emotionally open. According to Madhusmita, Quality leaders of the future need to be ready for ambiguities, uncertainties, potential dead ends. The following table summarises the Why, What and How an altrocentric leadership can influence a transformational change master quality.

Why Quality needs Altrocentric Leaders?	What are the Enterprise Impacts with a Quality Purpose?	How to Develop Capabilities for Quality Mastery and Competence?
The Why?	**The What?**	**The How?**
• Focus on Customer Satisfaction or scale-up the company • Keep employees safe or maintain efficient operations • Trade-off between performing now and transforming next • Create Perform-Transform strategic priorities by using prioritization Matrix • Grow the capacity with agility by identifying purpose, courage, awareness, inclusion and integrative thinking	• Think far and broad, with purpose-fuelled vision that goes beyond customers and competitors • Harness the full potential of the organisation: both now and future • Interconnect purpose, performance, and impact collectively • Influence others without having formal authority over them	• Perform-Transform capabilities, based on a leader's competencies and experience • Four areas: Visualize, Realise, Mobilise and Catalyze • Agile mindset to be 'Force Multipliers': They can both enable and accelerate results • Not only vertical power; it is about horizontal influence • In hyperloop technology era, create a hyper connected environment within and beyond business units.

Summary from Madhusmita Nayak's Presentation.

GREAT LEADERS CREATE LEADERS, THEY ARE BRAND BUILDERS AND VISIONARY

Keith Phillips is the CEO and President of QLBS. He was one of the fortunate people who met with Steve Jobs, one of the great leaders and visionaries of our time. When he was doing international marketing during 1980s Keith was looking for a machine to create graphics to market Gillette razorblades. That's when he met Steve Jobs. As we know, Steve Jobs transformed three industries: computers, communications, and music. Keith recollected some of his memories of Steve jobs and highlighted how leaders create leaders. In Keith's view, Steve Jobs was one of the great leaders; he engaged thought leaders like Steve Wozniak, Douglas Adams and George Lucas. He created the Knowledge Navigator in 1987 which enabled the creation of the vision for 25 years – and we are experiencing those technologies now. Keith's conclusion is: leaders create a vision, engage thought leaders in the journey, start by doing, prepare to fail and reward others for trying.

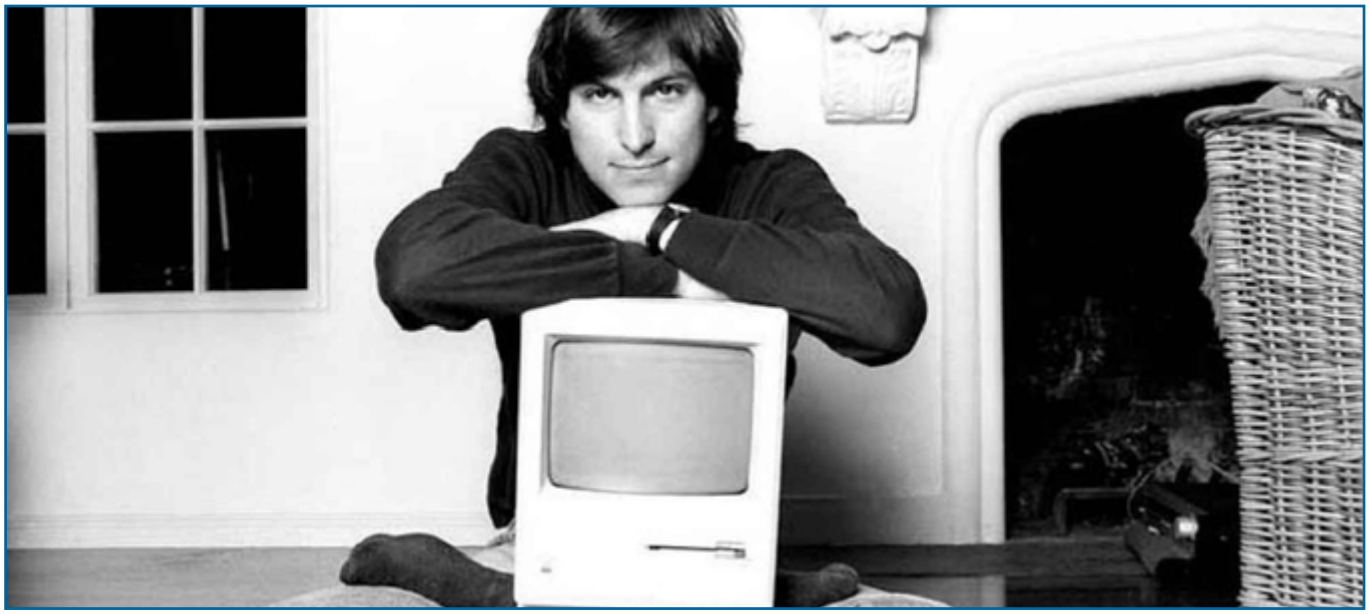


Image from Keith Phillips' Presentation.

Continued from **page 11**

Another presenter **Jessen Yeoh** compared ISO 9001 leadership to spiritual leadership. Some of the key highlights of spiritual leadership that overlap with ISO 9001 and 9004 Standards are vision, mission, values and culture, well-being, work environment including physical and psychological conditions, and leaders establishing the unity of purpose.

Alice Mastroserio is from Sydney, Australia. She has shared her 25 years of experience in Quality and provided us with some key points about how quality professionals can make themselves relevant to leadership. Alice shared six key lessons:

i) Study the strategy.
ii) Collaborate with right person who can open the door for you.
iii) Adopt to the leader's language.
iv) Focus on what matters most and what are the key risks.
v) Focus on business process.
vi) Quality narrative. These should resonate with Quality professionals and inspire them to support Leaders and change.

RETHINKING PEOPLE, CONVERSATION AND CULTURE:

Kirsty Harding is from Melbourne, Australia and is AOQ's Chapter Lead there. She presented on ***"Brewing up a strong culture of quality in a storm disruption"***. Kirsty created a recipe for quality culture with seven steps: measuring the current status; breaking silos; engaging staff; transforming to a learning organisation; accountability; reward; and reviewing to improve. According to Kirsty, Quality professionals are the change catalyst, sense makers, trusted advisors, and the eyes and ears of leaders. Kirsty strongly recommended focussing on value-add, keeping the ideas coming and measuring culture using a quality culture indicator.

Image from Kirsty Harding's Presentation.

Sue Jauncey is the founder of the Appellon (a Forensic Psychology organisation) whose purpose is to improve well-being and performance. Sue explained that it is the neuropsychological impact that causes the stress and anxiety that impacts behaviour. When cortisol is produced in the body, the stress hormone increases, and this needs to be balanced with oxytocin hormone to change the behaviours. Sue explains that it is very simple to deal with stressful situation. Just be kind! That will produce oxytocin which will immediately lower the stress, strengthen the immune system, and improve emotional intelligence. When oxytocin is balanced with cortisol, people can focus on issues and deal with them sensibly. Sue highlighted an important point, that the human brain is non-discriminatory and non-judgemental; it merely responds to what we feed it. So let us feed it with the best interests of people and the organisation, and so reduce the production of cortisol and replace it with increased oxytocin – that will switch the psychological pathways to be more creative and productive.

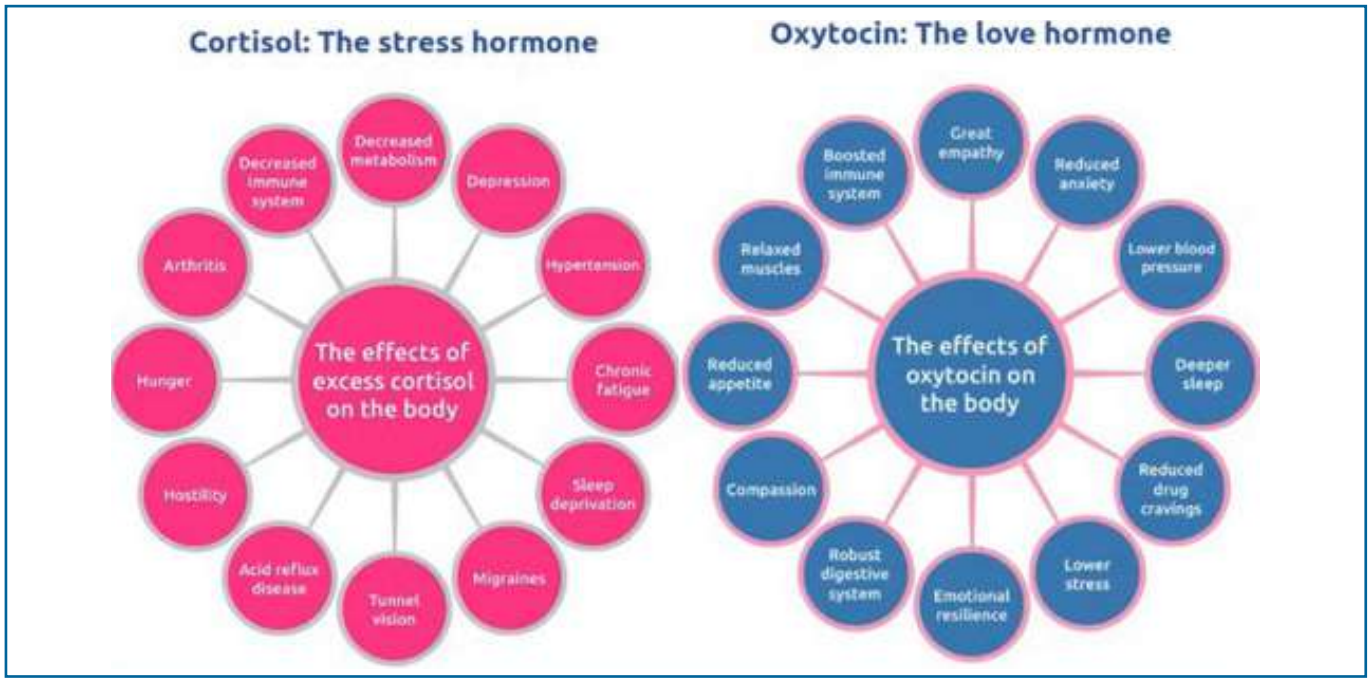


Image from Sue Jauncey's Presentation.

David Jago and **Brett Abraham**, from Brisbane, Australia, took a simple, practical case study and explained how to apply a structured conversation. They presented the 'Five Whats' framework: What is the focus, What are the facts, What is the reaction, What are the thoughts and What are the actions. They insisted that it is not the intellectual and knowledge content that matters in a crucial conversation, it is the feelings and emotions that matter. They recommend using reflective questions, connecting to the moments, and focusing on the outcome; the conversation gets smarter when it is structured.

Finally, I (**Matthew Rathinam**) presented on ***"How Management Innovation can shift the quality paradigm"*** We have come across many innovation types in an organisation like product, process, service, technology, marketing etc. Management Innovation is a concept that emerged just 10 years ago with Innovation Theory. Inventing management is not new, but what is new is understanding that this is a new type of innovation, and understanding the process of reinventing management. Management innovation is the invention and implementation of management principles and techniques that are new and state of the art. Leadership creates novel ideas, principles and values to transform an organisations' and people's capability; people's capability produces world class products and services; and the world-class products and services creates brand, image, and business sustainability. In summary, management innovation creates new principles, management philosophies and techniques that connect the leaders and people that drives success.

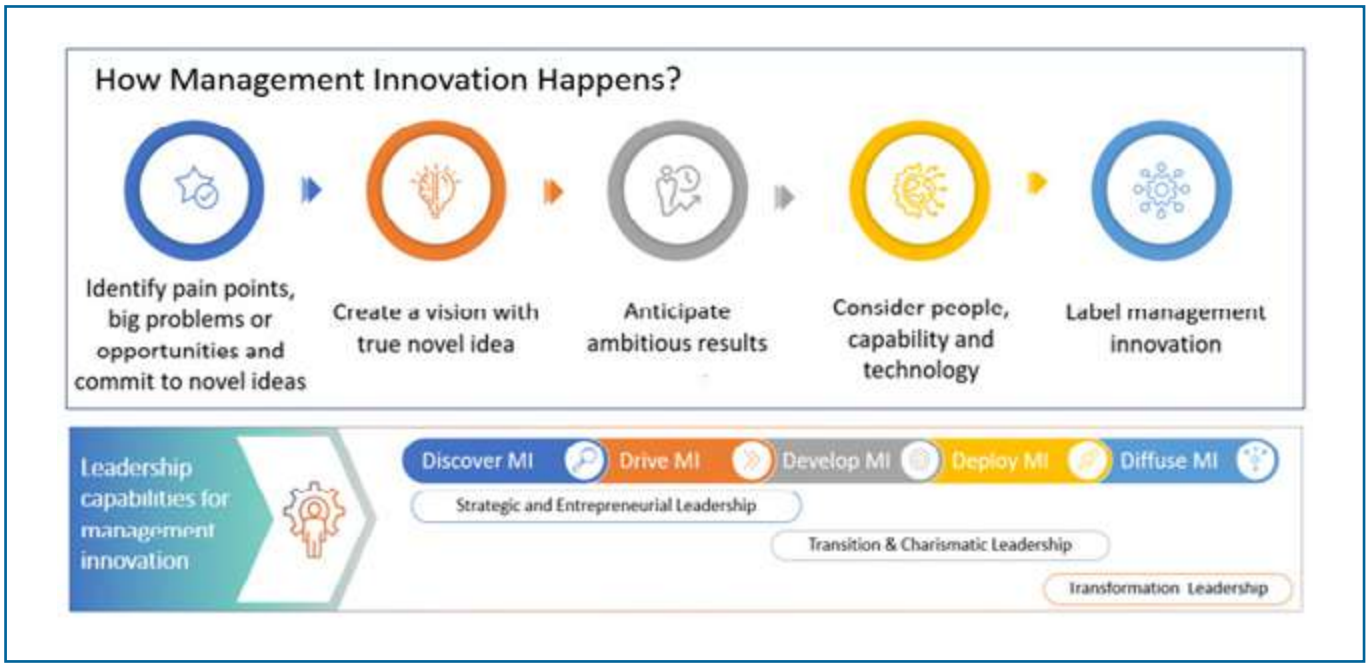


Image from Dr Matthew Rathinam's Presentation.

CONCLUSION:

All the speakers insisted that technology is making unprecedented changes, that this will continue, and we can't stop it. The focus for leaders should be on the people and their welfare, because in the end, it is the people who make the products and services and it is the people who make the organisations. It's all about people, their mental health, and their happiness at the workplace that will improve culture and productivity. When people get better, organisations get better. I believe the knowledge shared by the speakers in this conference provides a lot of insights, frameworks, and many inspiring ideas to lead the change and keep the people at the centre of the business achieving extraordinary results.

SHARE Q

Rethinking Processes Stream – Rapporteur Overview

Helena Juppenlatz *is the Risk, Ethics & Compliance Officer at WSP, a global professional services firm. She is the current AOQ Brisbane Chapter Lead and AOQ nominee to Standards Australia Technical Committee QR-017 Organisational Governance.*

I had the pleasure to be the Rapporteur for the "Rethinking Processes" Stream of the APQO-Qualcon 2021 conference. Not surprisingly, the common theme in this stream was the COVID-19 pandemic and how it made us rethink processes fast! The pandemic propelled our adoption of digital transformation and digital technologies. It has forced organisations to re-imagine and re-design their processes. The transformation and process change that would normally take years happened within months, if not weeks in some instances. Is that a good thing? Well, the future will tell, and no doubt there will be some casualties. However, the presenters demonstrated many instances in their case studies where digital transformation, process and culture change were successfully adopted by organisations.

I considered that the presentations fell into a number of categories: Keynote Presentation; other Presentations; Case Studies; Research Projects; and Statistics.

KEYNOTE SPEAKER

The Rethinking Processes conference stream started with an on-point Keynote Presentation from **Kumar Parakala** (the President of Digital at GHD, an international infrastructure professional services firm) titled "**Re-imagining processes to transform organisations in a post-COVID-19 world"**. I found this presentation particularly thought-provoking and absolutely fitting the Conference theme of 'The Future of Quality is *Now*'. This deserving keynote performance got us all thinking along the lines of digital transformation, highlighting how COVID-19 has contributed to the fast adoption of digital technologies and the huge industry shift this has caused. Kumar made the point that companies cannot afford to be stagnant in the current fast-changing world, and digital transformation and process changes are a must. He also highlighted that Quality Professionals are strongly part of this process and must understand the changes to help companies move forward.

this technology transformation through my own certification journey. From the user perspective, Exemplar Global did a great job and created value from a process that could have been an administrative burden. Another point that caught my interest in this presentation was the use of Artificial Intelligence tool 'EMMA', and the idea of virtual conferences. I think this is something our own organisation should look into for inspiration for future Qualcon Conferences.

Sharon Manssen from Aurecon (another international infrastructure professional services firm) gave an excellent presentation "**Datamining for Compliance Gold**" in which she highlighted how we now produce most of our IP in digital form and how our compliance and audit systems also need to leverage digital data and ensure that they are linked to and assist in achieving business strategy.

A presentation that we can all very much relate to came from **Luciana Paulise** titled "**Implementing 5S methodology in hybrid workplace**". In the COVID-19 world, many of us are working from home and, as a result, no longer being able to 'escape' to a nice and tidy and organised workplace without disruptions. Instead, we are finding ourselves not sure anymore if we are 'working from home' or 'living at work'. Add to it periods of homeschooling, and you have a recipe for a mental breakdown. Luciana is reminding us in her presentation that we can utilise the 5S tool to organise our everyday life. I think this is extremely helpful and highly relevant in the current climate.

CASE STUDIES

Sumeet Wagh highlighted the importance of a sound management systems framework in his presentation "**Unlocking Value from Management Systems**". I liked his point on the importance of confronting the 'brutal facts' before getting into solutions mode.

In a presentation titled "**Towards Quality Sustainability**" **Sunwoo Yoo** took us on the digital transformation journey of Saudi Aramco through a transition to Quality 4.0. The company capitalised on the digital transformation and use of digital tools, such as Smart technology, RD laser and QR coding. Sunwoo made the important point that innovation and application of Quality 4.0 lead to cost-effectiveness, operational excellence and business sustainability. Sunwoo's presentation was absolutely on point with the conference theme.

Roziana Othman's presentation on "**Process Transformation through Technical Excellence go Digital System in Malaysia**" provided another example of an organisation that was forced to go digital due to the COVID-19 pandemic and which has managed to create a more efficient and cost-effective process as a result, which will make the organisation more sustainable and will benefit the organisation well into the future.

Nur Zatul Iffah (or Fiffy) from CJ Bio Malaysia demonstrated in "**Innovative Solution of L-methionine 25 Kg Packing Operation Process system**" how her company utilised process improvement analytical tools and methodologies and re-design to implement innovation in a factory leading to their ability to automatically stack wooden pallets, leading to cost and time-saving, improved efficiency and client satisfaction.

Yuzain Razak from Social Security Organisation of Malaysia showed us how the enforcement organisation undertook digital transformation by implementing a digital integrated management system leading to the easier implementation of the COVID-19 pandemic subsidy scheme and resulting in multiple Awards for the team.

What all of the case studies had in common was that they demonstrated clear benefits of digital transformation. They also showcased a variety of quality management concepts and analytical tools and their applications to improve processes.

RESEARCH PROJECTS

Amir Ajmand presented his practice-based PhD research project from Swinburne University on "**Developing the innovation process in the food industry by introducing a lean new product development process**". In his research project, Amir discusses the Pros and Cons of various new product development process approaches, such as Stage-Gate, Agile and Lean, and their hybrids.

Professor Daniel Prajago and Nardia Page presented their Research Project on **"Determinants of Audit Duration**". This is an interesting research project funded by JAS-ANZ, looking to determine the correct audit duration to achieve high-quality audits. This is a subject close to many of us.

STATISTICS

The presentation from **Professor Milfora Gatchalian** on "**Measurement of Comparative Consumer Acceptability**" highlighted the importance of understanding the value we provide to our customers and how comparative statistical methods can assist us to understand that value. In her presentation, Milfora demonstrated how consumer acceptability can be measured and results leveraged for product improvements.

Professor **Milton Krivokuca** from ASQ highlighted the importance of statistics and data analytics as they relate to quality in "**Non-technical statistics in Quality 4.0 to support process improvement**" presentation. He demonstrated the importance of descriptive statistics, which describe the data in a meaningful and visual way and their application for business improvement processes. In his fictional example, he highlighted the importance of language in cross-generational business settings. He also demystified some misconceptions about statistics.

CONCLUSION

Throughout the presentations in this stream, the COVID-19 pandemic was the common denominator. Our generations have never had to adapt to changing conditions and changing requirements so quickly before. If the coronavirus pandemic has one silver lining, it is that it pushed us over the digital transformation edge over which we had been hovering for some time and wondering "should we?" or "should we not?". It made us take the risk and just go for it. There was no time to plan, and it was a matter of survival for many companies and organisations. Unfortunately, digital transformation alone will not have saved all businesses. And not all digital transformation processes ended well, either. We have just experienced a giant technological and process change leap. It will take us some time to work out what worked well and what did not, and it will take even longer to uncover underlying benefits and issues we have not yet thought of. But there is no doubt that through a terrible situation, we have achieved something incredible.

I hope that as we are emerging from the pandemic that we don't forget the good lessons and that we leverage this 'unwanted push" we received. As quality professionals, most of us will be in the position to make a difference and ensure that the silver lining is not forgotten and the improved processes and systems are embedded and are built on in the future. The *FUTURE OF QUALITY IS NOW!*

I would also like to thank all the presenters for their contributions and for finding the time in their busy lives to create something to enrich our community.

SHARE Q

Rethinking Excellence Stream – Rapporteur Overview

Sumeet Wagh
Director, Control20 Consulting
E: sumeet.wagh@control20.com.au
P: +61 427 194 945

Director of Control20 Consulting, a boutique consultancy firm helping businesses design, develop and program manage strategic improvement projects, Sumeet has an unquenchable passion and expertise for business improvement, continuous improvement, and change management.

With more than 20 years of experience in Asia and Australia, Sumeet has worked in Manufacturing, Telecommunications and Construction industries. He has extensive experience in developing and implementing Management Systems across these industries and is passionate about ensuring systems and processes add value to the bottom line of the business.

COVID-19 has left its mark all over the world. Countless organisations have struggled during these unprecedented times, and many have been successful because of their commitment to their business excellence framework.

It was therefore opportune for the conference's Stream 'Rethinking Excellence' to explore 'What is excellence'? across the spectrum past, present and future. How useful have the various models of excellence, such as ISO 9000 series and business excellence frameworks proven to be? How useful and enduring have the various tools and methods that been developed proved to be and what will excellence look like in a future world?

The presentations of the knowledgeable and experienced speakers were diverse and rich in content and covered thought provoking topics. It was great to see presentations from all parts of the world: Australia, NZ, Philippines, Singapore, Malaysia, China, India, Nepal and as far as from the United States of America – an amazing total of 13 presenters from 9 countries.

I was humbled and privileged to be the Rapporteur for ***Stream 3 – Rethinking Excellence*** and to provide you with insight into this fascinating Stream, I have summarised each of the presentations, and I highlight some common ideas, and ideas & case studies that I considered thought provoking. I conclude by exploring how these presentations contributed to the overall theme of the conference ***"The Future of Quality is now".***

This Stream had two keynote presenters. **Mike McLean** and **Devraj Chattaraj**. They each provided a powerful presentation which was an apt introduction to topic 'Rethinking Excellence'.

Mike a very experienced, knowledgeable, and insightful leader. His presentation ***'Future of Business Excellence: What to Keep, Change & Create'*** was enriched by his anecdotes and insights as he shared his wonderful journey of Excellence.

Mike provided some good examples, one which I was particularly drawn towards was how the New Zealand Defence Industry Association was able to pivot in the pandemic by using the Keep Create & Change™ framework to work out:

- where they wanted to be, and
- worked their planning activities backwards from that.

Mike spoke about *'Right Left thinking' (as shown in the picture below)* as a perfect template for audiences when developing their strategy, where you decide your long-term vision (or what you want to *Create*) on the right-hand side and work backwards to define what to *Change* and *Keep*.

Mike was eloquent and articulate, and his keynote was very informative. In the volatile, uncertain, complex, and ambiguous world we find ourselves in, we can use *Keep Create & Change*™ to get the PRISE of business excellence by building a system which is resilient to cope with the changes.

Devraj Chattaraj presentation was also fascinating, and I cover that below under 'Case Studies'.

COMMON TOPICS

While I listened to these presentations, there were some common topics which came to the fore including:

- Research into Excellence.
- Raising auditor competence.
- Case studies.
- Using technology.
- Though provoking ideas.

Continued from **page 17**

TOPIC 1 - WHAT'S HAPPENING IN THE WORLD OF RESEARCH INTO EXCELLENCE?

There is some exciting research being done in the Business Excellence area globally to understand how to design and deploy Business Excellence frameworks as well as the architecture required to support an award-winning business excellence journey. Massey University, NZ seems to be leading the way in this research.

Dr **Saad Ghafoor** (from Massey University, NZ) presented ***'Global study on Designing Business Excellence Framework & Promoting, Facilitating and Awarding Business Excellence'.***

Dr Saad stated that a key finding of his research is that Business Excellence custodians focus more on their Business Excellence activities rather than on the promotional and facilitation activities of their Business Excellence framework, as such reporting low levels of Business Excellence awareness and usage levels.

A general framework for designing and reviewing a Business Excellence Framework was provided by Dr Saad along with recommendations for Business Excellence custodians to improve their Business Excellence promotion, facilitation, and award activities.

Atif Baig also from Massey University, explored the Organisational Architecture required to support an Award-Winning Business Excellence Journey in his presentation ***'An Exploration of the Organisational Excellence Architecture required to support an Award-Winning Business Excellence Journey'.***

Atif presented a conceptual Organisational Excellence Architecture (OEA) model with two components:

- Components of the OEA.
- Internal Structure, Resources, Processes & Assessment tools.
- Factors influencing OEA
  e.g., Organisation sector, how quickly they want to implement Business Excellence, Size of the organisation, and the Level of maturity.

TOPIC 2 - RAISING THE COMPETENCE OF AUDITORS

This topic examined formal apprenticeships and formal training (e.g., University programs).

I firmly believe External auditors have a massive role to play in Organisation's business excellence journey.

Auditors focussing on the binary of "compliance/non-compliance" and not understanding the business they are auditing creates a huge risk for the business which could potentially derail the auditees from their business excellence pathway.

You are probably aware that the only formal training to be a Quality auditor is Lead Auditor training.

I was delighted to see these two presentations which discussed the topic of formally upskilling management System Auditors.

'Auditing for 21C' was based on some research (albeit with only 26 participants) conducted by Dr **Roslina Ab Wahib** from Malaysia, **Kathryn Lockyer** from JAS-ANZ in NZ, and Prof. **Nigel Grigg** from New Zealand's Massey University.

Their Delphi study was conducted with an aim to develop an open curriculum framework for delivery of future training and education of external quality auditors. The study:

- Investigated whether there is a need to further educate external auditors to improve their audit performance.
- Identified the expectations on the external auditors, and
- Developed a framework for the competencies needed by external auditors to enhance auditor capability and performance.

The results of this study demonstrated that there is a gap between audit performance and clients' expectations; it has reinforced that there is a need for better education of external auditors to cater for current and future requirements in auditing.

'First Organised Career Path for Quality Auditors', presented by the charismatic speaker **Albert 'Skip' Greenway** from USA, nicely complemented ***'Auditing for 21C'.***

Albert was quite honest and presented with flair as he walked us through how the Independent Association of Accredited Auditors (IAAR), in partnership with US Government Departments, has developed a first of its kind white collar apprenticeship career pathway for Management System Quality Auditors. It highlighted the importance of having an organised career path for Quality Management System Auditors.

I agree with Albert that:

- Quality systems and processes touch every industry,
- Quality auditors are less than well known,
- they are really misunderstood by majority of people, and
- Quality auditing is an industry less than 50-years-old,

and that we therefore need to have an apprenticeship program to provide the world with competent, trained Quality Management System Auditors at the beginning of their career.

The proposed IAAR Apprenticeship is 1–2-year program based on Knowledge, Skill & Abilities (KSA) involving Subject Matter Experts (SMEs) and 90% on the job training.

I loved the ideas in these presentations and was delighted to see the progress towards increasing auditor competence. While it is vital that organisations have a strong internal audit program, it is equally important that the external auditors are competent and understand the business and not only the Standards they are auditing. Having competent auditors will help organisations build systems around their core processes, thus setting the organisations up for success in years to come.

It is quite exciting to see that these programs would create a formal pathway for many people to become Quality Management System Auditors, thus complementing the standard Lead Auditor courses.

TOPIC 3 - CASE STUDIES

We enjoyed a diverse range of case studies.

"Performance Excellence Framework Adoption Experience: Answers to the "What, Why and How?" was presented by **Engr. Angelica Cortero Fraginal**. Angelica, a passionate speaker from the Philippines, shared her experience in adopting the performance excellence framework and how to successfully implement this framework using her ten strategies. I really liked these, and of them I felt "investing in technology" was the most important of her ten strategies.

Xi Qinfeng from People's Republic of China presented ***"Responding to Public Emergencies-Practices and Standardisation of Organisational Quality Management"***. He spoke about how the Shanghai Association of Quality project team used the ISO 9001 QMS approach to analyse the internal and external factors affecting the organisation and applied risk management techniques and methods to create the Quality Management System – Guidelines for Public Emergency Response which sets out group standards for urban public transportation and residential communities.

Janardan Ghimire of Nepal spoke about his experience in ***"Growth of Excellence of Orthodox Tea Sector through Organic farming, GMP & ISO 22000 in Nepal"***. It was great to see superb commitment by the farmers to engage in this Excellence program despite limited resources; his presentation reinforced the adage that "When there is a Will, there is a Way"!

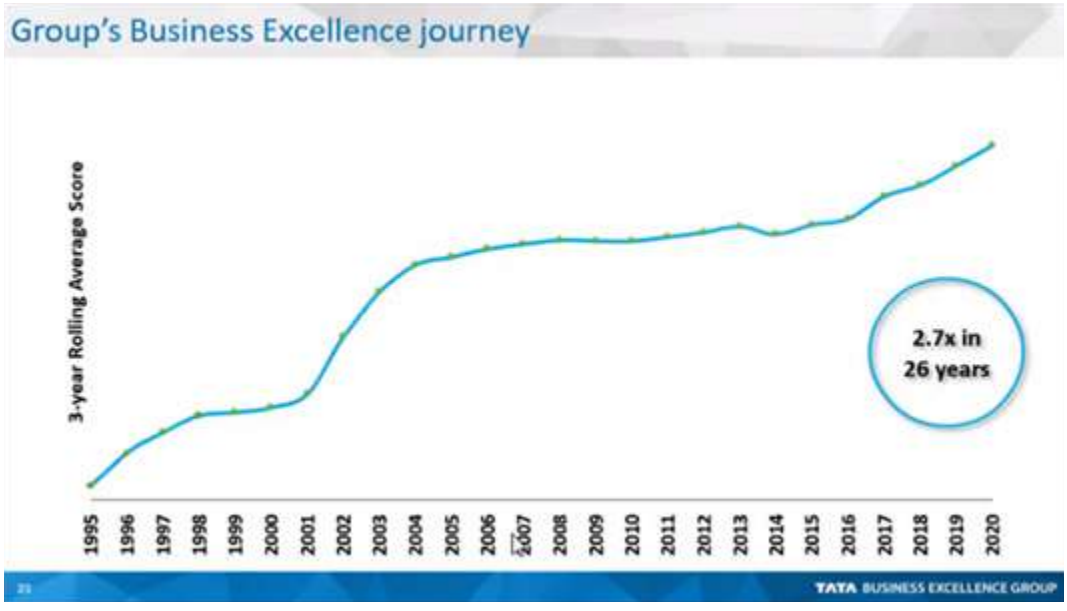
"The Excellence Journey in Tata – A Case Study", was a keynote presentation by **Devraj Chattaraj**, GM Tata Business Excellence Group, India. This was the presentation which I personally most enjoyed. Tata Group is the most admired corporation in India; it operates in more than 100 countries and has a mission to improve the quality of life for the communities they serve globally through creating long-term stakeholder value based on leadership with trust. Devraj, a fluent and experienced presenter, walked us through the genesis of the excellence journey in TATA Group of industries, with some valuable examples.

The late Mr JRD Tata, Past Chairman of TATA Group, an aviation pioneer who created India's first airline and oversaw Tata Group's remarkable growth to become India's largest industrial empire, said, *"One must forever strive for excellence, or even perfection, in any task, however small, and never be satisfied with the second best."*

JRD Tata's thoughts were the genesis for business excellence in TATA group. JRDQ Award is the most coveted award in TATA group and business units strive hard to achieve this award.

Devraj made it so easy for us to understand how the TATA Group Business Excellence Model works. He explained the Tata Business Excellence Model (TBEM) landscape which covered TBEM criteria, and the assessment process.

Late Mr JRD Tata Past Chairman TATA Group



As the companies mature in their journey of excellence through the TBEM, they grow to be 'Industry Leader', then a 'Benchmark Leader' and finally to be 'World Class Leader'.

The graph shows how the assessment scores have almost tripled since 1995, demonstrating that there is a huge commitment from the Leadership team in their Business Excellence framework.

It was fascinating to learn how the best go about their business.

As a personal aside, I have an affection towards TATA group that has been with me since childhood when I lived next to Tata Motors. As a young engineer I always wanted to be part of TATA group. Notwithstanding my fondness for TATA, I really felt Devraj delivered a fabulous presentation.

Continued from **page 19**

TOPIC 4 - USING TECHNOLOGY

A very knowledgeable and informed **Carew Hatherley**, the Managing Director of IQM Group, Board Member and Secretary of the NZ Business Excellence Foundation took us through how a little-known ISO 9004 standard is quietly taking quality beyond binary into the digital age in his presentation ***"Taking Quality Beyond Binary"***.

Carew argued that by digitising ISO 9004 onto a cloud application, we can retain the best practice reputation that ISO Standards are renowned for whilst using the assessment style audit approach to populate a database of highly useful information.

This will allow organisations to make evidence-based decisions at both strategic and operational levels, whilst also allowing them to further benefit from anonymised peer benchmarking. The ability to track continuous improvement against all 31 Clauses of ISO 9004 by undertaking self-assessments as often as an organisation deems necessary is a step forward towards offering an alternative to the yearly surveillance audit by a Certification Body.

Although organisations cannot get certified against ISO 9004, Carew pointed out this little-known ISO standard (which is the least binary) is probably turning out to be best suited to the digital business world.

I whole heartedly agree with Carew when he says that as we enter Quality 4.0, we are well set to maximise the benefits that technology can bring to traditional quality methods, particularly as businesses find ways to utilise data to gain competitive advantages and increase quality.

Using a similar concept, I personally would like to see the typical internal audits being carried out as assessments against ISO 9004, providing Senior Management a clear line of sight of how effective their processes are, and further helping key stakeholders of the business in their journey towards business excellence.

Srividhya Venkatesan is a most articulate and energetic speaker. In her presentation ***"Experiential learning through Immersive Technologies to enhance knowledge retention & reduce cost of poor quality"***, she proposed that it is an Experience Economy that consumers are expecting.

Srividhya rightly stated, *"Experience is a different economic offering, commodities are tangible, goods tangible, services intangible and experiences memorable"*.

Immersive technologies make dreams come true and have altered the training landscape drastically by introducing the most effective form of learning known as 'learning through experience'.

By using immersive technologies in their training delivery methodology, Srividhya claimed that Businesses can enhance knowledge retention by 80%, reduce the training costs by 50% over a period, and deliver 100% experiential learning.

TOPIC 5 - THOUGHT PROVOKING PRESENTATIONS

Ravi Bhattarai and **Partha Dev** delivered presentations that were particularly thought-provoking.

Ravi, an experienced Six Sigma professional, argued that collaborative excellence can be achieved through Agile/Scrum implementation in a non-Information Technology (IT) context. Ravi's hypothesis was that transparency and collaboration among team members helps everyone and we can achieve this through Agile/Scrum.

Ravi is not wrong; I have seen more and more organisations implement Agile/Scrum practices to achieve better outcomes for their improvement projects.

Another thought-provoking presentation ***"Making Standardisation a Key Ally in Managing the Energy Sector Disruptions"*** was given by the ever persuasive and eloquent **Partha Dev** from Australia. He addressed the common belief that improving Quality and Safety is counter intuitive to reducing cost. He put forth the solution of 'standardisation' to solve this conundrum. Drawing attention to the international initiatives that seek a way to reset the way we have done things in the past, he logically explained some Australian case studies that demonstrated the benefits of standardisation.

In his concluding remarks Partha challenged the audience to reflect on how we worked in the past, to 'reinvent the wheel' by closing the past gaps and thereby find a way to 'rethink the future' of Quality. He asserted that making standardisation your key ally to improve quality and safety will give you the big prize of cost optimisation.

CONCLUSION

It was a pleasure to be able to review all these presentations. Whilst there were no conflicting views in this Stream, the presenters did provoke thought, and all these presentations had a clear connection this conference theme: ***"The future of quality is Now"***.

1. What is excellence, past, present, and future?

We saw through the TATA excellence journey how the TATA Group's bespoke Excellence Framework (TBeX) is based on the Malcolm Baldridge excellence framework. TBeX has been embedded and regularly updated with time, and demonstrates how well the excellence framework has set the TATA businesses to be World Class Leaders in their field.

2. How useful have the various models of excellence, such as ISO 9000 series and business excellence frameworks, proved to be?

Interestingly this Topic could have included case studies on how the leadership teams have taken their organisations on the excellence journey; the ways they went about overcoming challenges in their journey would have been very helpful in sharing knowledge and experience with the audience.

The question of how useful various models of excellence have proven to be did not seem to be answered, and the unassuming yet clearly emerging ISO 9004 standard was highlighted to be the one best suited to the digital business world taking quality beyond the binary.

As we enter Quality 4.0, we are well set to maximise the benefits that technology can bring to traditional quality methods, particularly, as businesses find ways to utilise data to gain competitive advantages and improve the way we deliver quality outcomes.

3. What will excellence in a future world look like?

The research conducted in Massey University, NZ promoting a structured education program, and similarly across the globe in the USA where the IAAR is developing a 1–2-year pathway to develop competent external auditors, will both lead the way in educating upcoming quality professionals. *It is quite clear: the Future is in building human capital in our profession to serve various industries better.*

Continuing education will always be there, however using Augmented Reality and Virtual Reality tools will take users on a 3D journey, creating an experience economy leading to retaining knowledge and subsequently reducing costs; this for sure will be the future.

Adam Grant, in his book "Think Again" stated that "In a turbulent world, there's another set of cognitive skills that might matter more, the ability to rethink and unlearn." We need to Keep Create & Change™ to get the PRISE of business excellence by building systems which are resilient and will cope with any change.

JAS-ANZ

ACCELERATE TRAINING ACADEMY

We're raising the standards in accredited certification.

And there's good reason your business should too.

Elevate accreditation and certification from a simple compliance-focused exercise to a valuable business process that enhances efficiency and effectiveness in every way.

The JAS-ANZ Accelerate Training Academy will equip conformity assessment professionals with the latest knowledge, skills and understanding to intelligently and consistently interpret and apply standards for optimal outcomes.

We believe that by improving industry knowledge, we can raise standards for the benefit of businesses, their customers and as a result, the economy.

visit us to learn more

jas-anz.org/accelerate

SHARE Q

Rethinking Customers and Relationships Stream – Rapporteur's Overview

Charlotte Payne *has worked as a Quality, Health, Safety and Environmental (QHSE) professional for the past 20+ years in Australia, for subcontractors that support the Operating Companies in the Oil & Gas and Mining industries, as well as working in the Infrastructure and Manufacturing industries. She has extensive knowledge in managing QHSE across simultaneous, multi-million dollar projects. Charlotte currently owns a QHSE Consultancy business where she applies her QHSE knowledge and experience to support small to medium sized businesses to implement best-practice models and meet compliance responsibilities.*

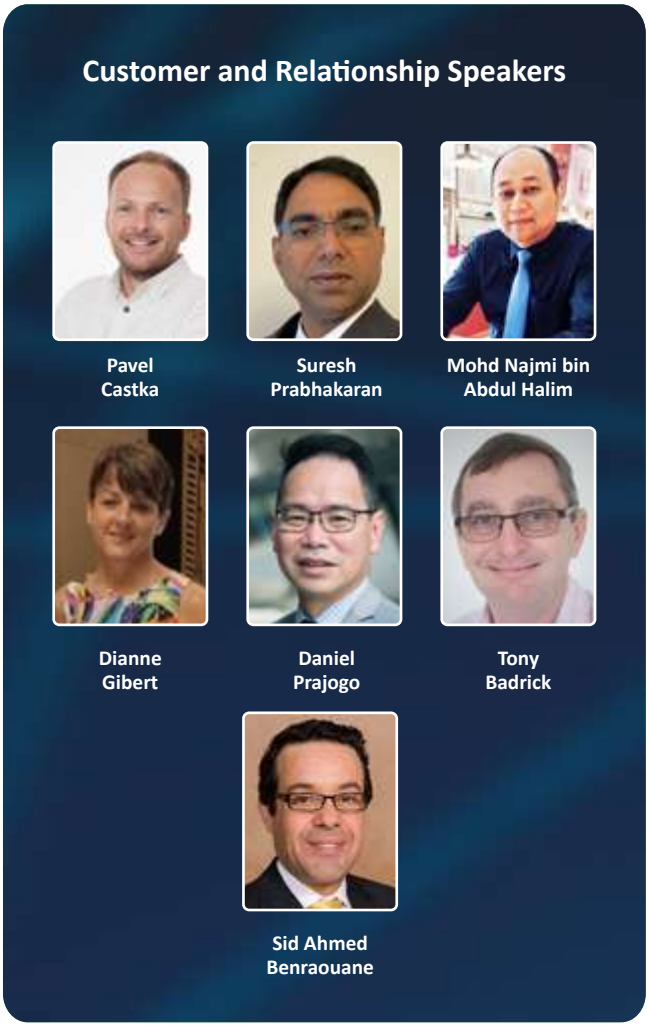
The focus of this Stream sits firmly with the customer.

The customer is, of course, the reason products and services are developed, the reason businesses exist, and the very focus of quality management itself.

Relationships with our customers are complicated ones. We must consider the customer services we provide, how we manage our performances and their relationships, how we market for them, and how we communicate with them and perhaps
most importantly, how we determine their expectations in order to consistently provide products and services that meet and exceed their requirements.

So, how do we apply quality in the late 21st century? How do we adapt the application of quality management to an age of advanced technology, changing political climate, and social influences while remaining relevant across industry?

Our panel of seven quality professionals addressed this Conference Stream, "**Rethinking Customers and Relationships"**. These speakers offered a deep dive into real-time applications that support the Customer-aspect of quality management. They took us on journeys inside their professional worlds to look at impacts and opportunities of modern-day quality with a customer focus.



Pavel Castka, a quality professional based in New Zealand, is a Professor of Operations Management and Sustainability at the University of Canterbury. He is also a committee member for ISO-TC 176/SG2, QR-008 and WG Brand Integrity.

In his presentation he explored the application of technology when conducting audits and undertaking monitoring activities, what he calls technology-enhanced auditing eco-system (TEA).

Castka described a system that marries together:

- Monitoring in-house performances using sensors, wearable technologies other AI technologies

- Data collection – utilising technology that enhances veracity and timelessness of data collection.
- The audit itself – analysed using AI technologies.
- Audit results – including predictive analytic results.
- Third party technology – monitoring performance using drones and satellite imaging provided by 3rd parties.
- AI system – compilation of data utilising learning machines to improve predictive ability.
- Data sharing – combining the results from multiple data sources and sharing publicly.

Suresh Prabhakhan, a quality consultant based in Australia, is a former WA Chapter Lead for AOQ and a member of both CQI/IRCA and ASQ.

Suresh discussed utilising a blended approach to tried-and-true quality processes, such as process audits, lean principles, documentation and digitalisation. Suresh explored the application of digital technology in the oil and gas and mining industry in his presentation "**Delivering Positive Supplier Transformation Outcomes to Achieve Customer and Stakeholder Objectives**".

Suresh explained how oil/gas well services in the oil and gas industry were made more efficient and cost effective by applying lessons learned through the application of quality processes, resulting in savings to the customer, and reducing the cost of failures across oil/gas well assets.

Suresh also discussed the application of robotics in the logistic industry to create efficiencies that result in value add for the customer.

Mohd Najmi bin Abdul Halim, based in Malaysia, is the founder of the Malaysian Government's Social Synergy Programme..

Revolutionising its service delivery system through a journey of streamlining services and centralising its delivery to its citizens, Halim walked us through the process the Malaysia government undertook to deliver its vision of a welfare nation. With the application of quality management's continual improvement principle, Malaysia has transformed its social security programme to best support the needs of its people through the delivery of its social synergy programme.

Dianne Gibert, based in Australia, is the Managing Director of Certex International.

In her presentation Dianne discussed her development of the Talent Engagement Standard, TES. The Talent Engagement Standard is geared towards businesses that deliver human resources. The Standard sets best practice models for organisations which recruit and manage workers and was created with reference to legislative requirements, existing industry standards, and business best practice. It defines critical compliance areas for employers.

The TES is a great tool for businesses that may best benefit from compliance without certification. It can also be used as a Standard for certification.

Daniel Prajogo, based in Australia, works closely with JAS ANZ and is also a Professor at Monash University.

Continued from **page 23**

Utilising project background data that gauged how businesses select Certification Assessment Bodies, Daniel's presentation delved into current trends in selection, information that is available to businesses regarding certifying bodies, and results of surveys conducted to better home in our customer requirements.

Tony Badrick, based in Australia, is CEO of the Quality Assurance Programs of the Royal College of Pathologists of Australasia .

In his thought-provoking presentation Tony discussed the application of technology in laboratories to meet customer requirements in COVID-19 times. Progressing through the stages of the spread of the COVID-19 virus over the past 18 months in Australia, Tony demonstrated the innovative application of quality as evidenced in testing methods, efforts undertaken to meet customer demands and successes made along the journey.

Sid Ahmed Benraouane, based in Dubai, works with the Dubai government. Sid is also the UAE delegation lead for ISO TC 279.

Sid's presentation took a wider view of the application of technology to improve the customer experience. He presented data that depicted the current technology available, looked at the businesses that utilise them and that touch our daily lives, and offered an educated glimpse into the future of Artificial Intelligence on the customer experience.

Our quality professional presenters delivered on the focus of the Stream by sharing their expertise with us to offer informative and thought-provoking insights into how application of Quality lends itself to **Rethinking Customers and Relationships**.

These presentations allowed us to consider innovative approaches to quality, including the use of technology to meet customer requirements, its application in both the government and private sectors, and a look into the holistic customer experience utilising Artificial Intelligence.

Practical Tools for Improvement: Control Charts – what are they and why they should be used

Dr Jackie Graham
FAICD FAOQ,SMASQ

Dr. Jackie Graham *is the managing director of Statistical Edge a business improvement consulting company. Her doctorate is in the application of quality management and statistics in the automotive industry. She has worked as a business improvement consultant in a variety of industries for the last 30 years. She was privileged to work with Dr. W. Edwards Deming over the last 5 years of his life. In 2021 she was awarded the Juran Medal by AOQ.*

The most powerful tool for improvement is the control chart. While it is a statistical tool, it has the ability to increase understanding of a process or system, and change thinking on how to improve. Control charts really are this impressive! Even better is that the mathematics involved is simple.

Control charts are a graphical tool, which means any patterns or trends in the data can be easily found. For example, an organisation during a production meeting was looking at the number of units produced per day, the results can be seen in Table 1. Review of this data by the management team resulted in a heated discussion about the 221 units produced on the 12th January. The production manager was certain that this high result, which had not been achieved before, must be an indication of improvement on the shop floor. This immediately interested the sales manager, who had customers waiting and a reduced lead time would be a significant advantage. However, the production supervisor thought that it wasn't due to improvement, it had just been a good day. So, should they celebrate the improvement or understand that it is part of normal variation? Normal variation means that the units produced will change within a range each day, and most likely the next few days will produce a lower number of units. However, if the production manager is right, then the company can look forward to a higher number of units being produced in the future. Figure 1 shows a simple run chart with the data plotted.

Date	Units produced
1-Jan	190
2-Jan	197
3-Jan	218
4-Jan	208
5-Jan	212
6-Jan	205
7-Jan	206
8-Jan	202
9-Jan	206
10-Jan	200
11-Jan	202
12-Jan	221

Table 1

Continued from **page 25**

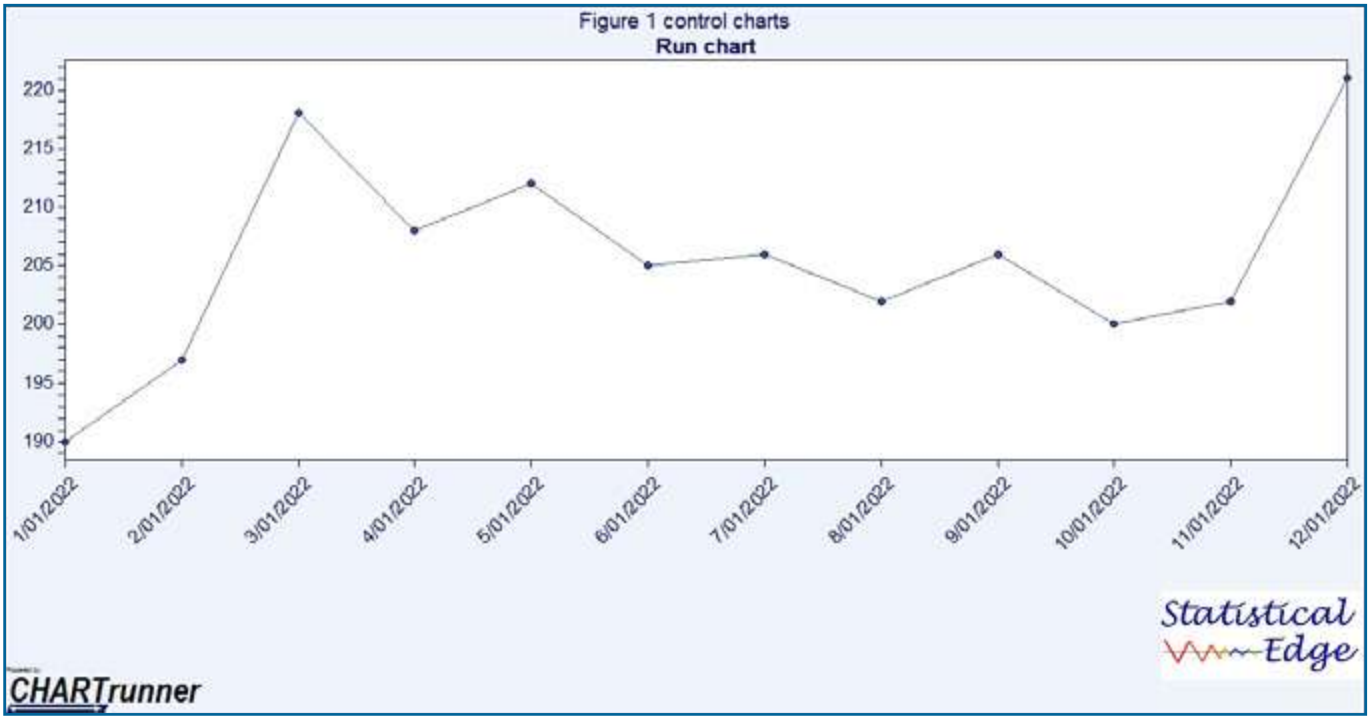


Figure 1

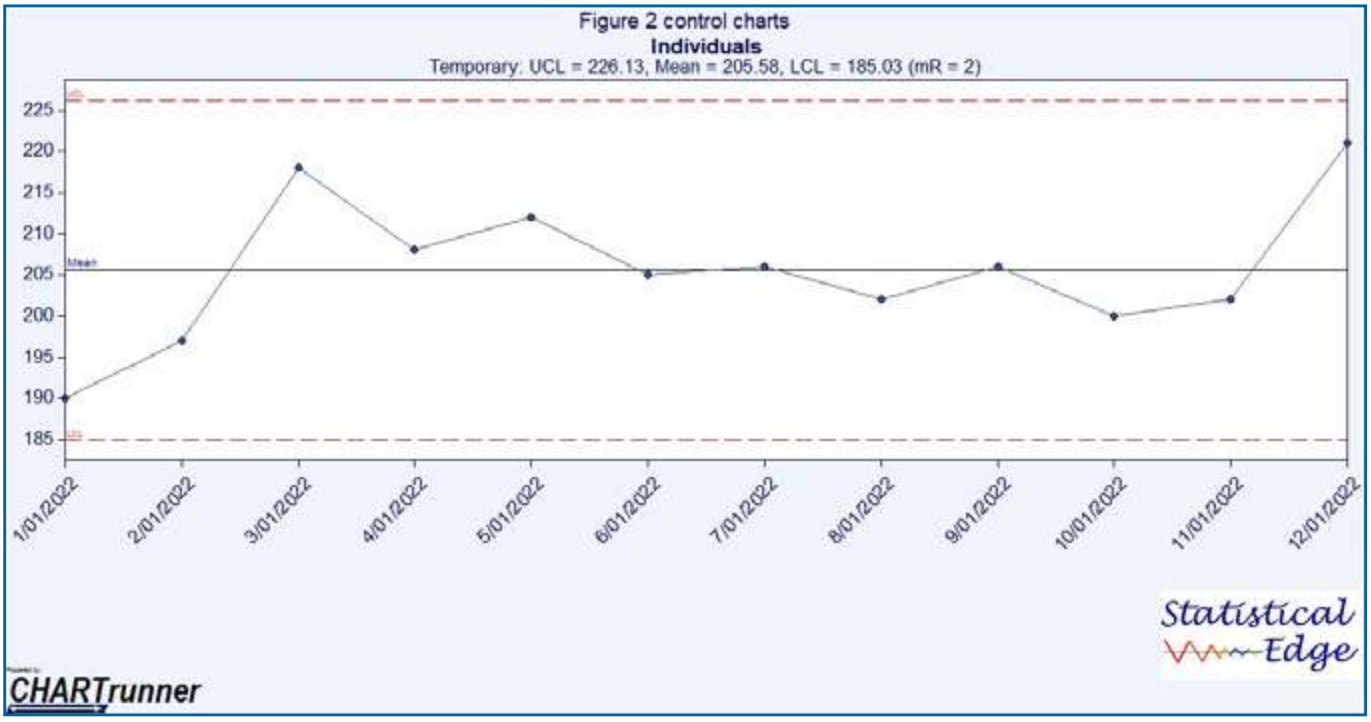


Figure 2

Looking at Figure 1, it is clear to see that the latest result is higher. But is it significantly higher? Taking the same data and putting it into a control chart can be seen in Figure 2. There are three lines added to the run chart to make a basic control chart. First, the average line, then control limits which estimate the normal variation in the data; they are placed 3 estimated standard deviations away from the average. The control chart clearly supports the production supervisor's viewpoint that while it was a good day nothing special occurred. Of course, collecting more data will help increase the understanding of the process. Figure 3 shows the following days of production, which further validates that the 12th of January was just a good day and that nothing special occurred. By using control charts, the management team no longer have to use gut feel and best guesses, they can use a control chart to get a better understanding of their process and can build consensus in the team.

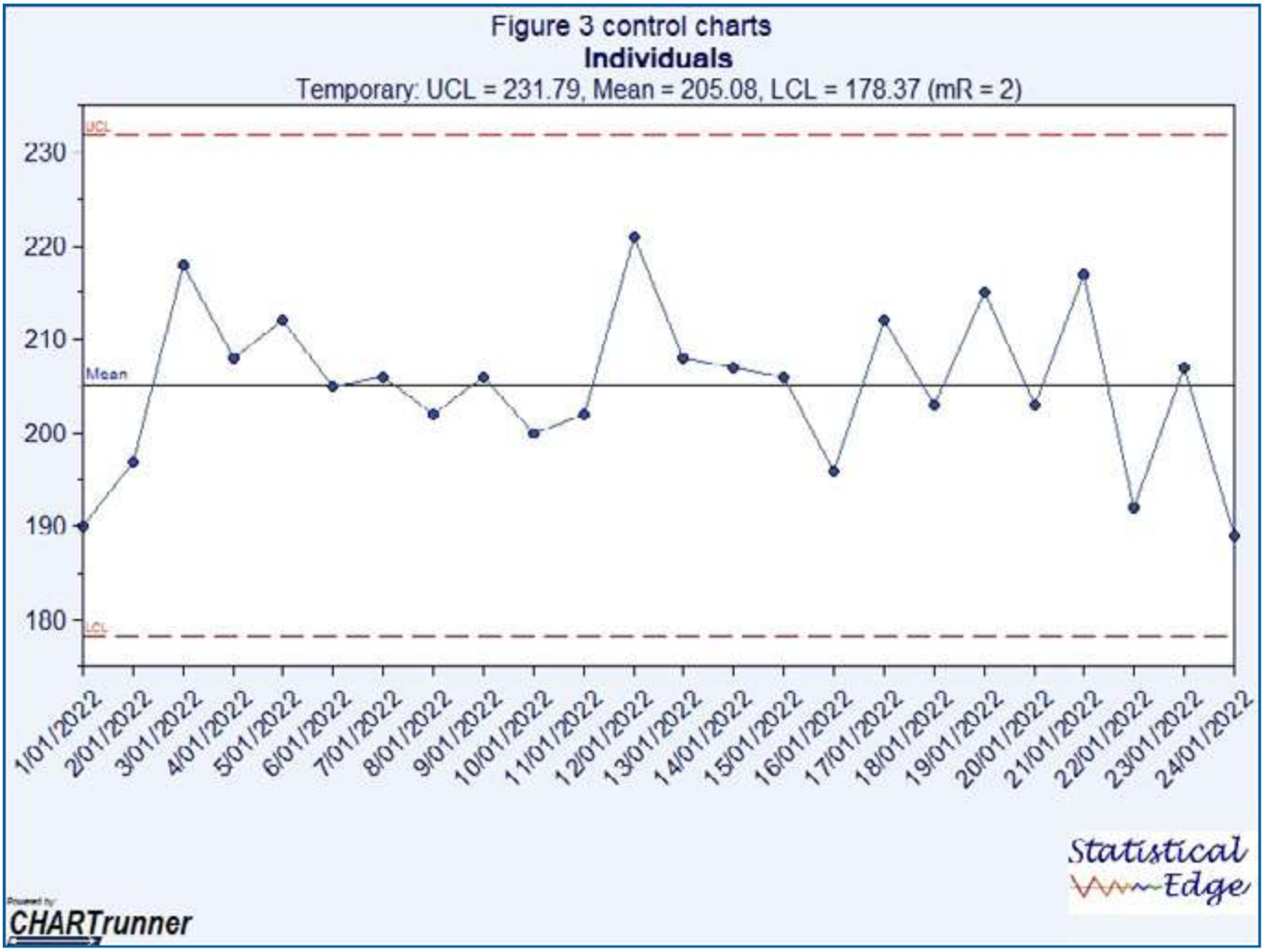


Figure 3

The 24th January data saw production drop to only 189 units. Of course, this is lower than previous and could easily cause concern, but the control chart shows this is again part of normal variation.

So why is it important to understand whether something is normal variation or something special is occurring? The reason is that our behaviour can change. If variation in the results is part of the normal system as shown in the control chart in Figure 3, then reacting to any results inside the control limits does not make sense. If the number is low wait a day or two and the number will be higher again. Similarly, if the number is high, this does not mean the process has changed and will drop in the next few results.

Looking at Figure 3 it is apparent that on average the production process will result in 205 units a day and that the variation that can be expected will be between 179 and 231 units. That is a lot of variation! It is obvious that if the organisation wants to improve, producing a more consistent number of units would help make deliveries easier to predict and would make the sales manager's job easier when trying to estimate availability to their customers. But currently the process variation is high as shown on the control chart, in order to increase the number, or reduce the variation, the whole system will need to be reviewed. Making minor changes to parts of the system is unlikely to have any impact.

So, what is different about special causes? Firstly, looking at a special cause on the low side; for example, if only 170 units were produced. A review of why will yield a reason that is not part of the normal system. It maybe that a supplier has had a shipment issue resulting in a shortage of parts. When a special cause occurs two actions need to take place:

1. Immediate action to overcome the current issue – in the case of a supplier shipment issue then alternative parts will need to be found or a shipment expedited via another method otherwise further delays will occur.

2. Action to prevent recurrence of the issue – can this issue be prevented from occurring again? Working with the supplier and understanding their potential supply issues can assist in future prevention. For example, if the supplier has a truck driver shortage, can the organisation send a truck to pick up the parts? This requires improved communication with the supplier and a willingness to be proactive on both sides.

Continued from **page 27**

Note: in ISO9001 these are referred to as correction and corrective action steps respectively when handling a non-conformity.

Of course, the consequence of not completing the preventative action is that the special cause can recur; even worse it can become part of the normal system. If a supplier became unreliable due to ongoing truck driver issues and no action was taken, then production could be impacted on a regular basis. This would obviously be detrimental to the organisation and would cause increased variation in the units produced per day, and likely lower the average. When special causes occur, there is generally a lot of effort to overcome the immediate issue, but often the preventative action gets forgotten even if it's simple.

What if the cause is positive, for example if 240 units were produced in a day? Unfortunately, many positive special causes are overlooked, by their very nature they have not caused a problem! But there is a tremendous opportunity to improve the system in a permanent way. Can the improvement be locked into the system? In this case the immediate action is to understand why it happened; in the example given, an alternative supplier may have been used for one of the parts and was easier to assemble. The second action is to understand whether the improvement can be made part of the normal system; can the organisation switch to the alternative supplier? This is the easiest way to improve any process, make a positive special cause part of the normal system.

Of particular concern is when a process is consistent and inside control limits, known as statistically stable, but action is taken as if a special cause is occurring. An easy example to explain is the heating or cooling systems in a home or workplace. The temperature cycles and the heating/cooling system switches modes and compensates. If someone is hot and adjusts the temperature lower, then someone is cold and adjusts the temperature hotter, the variation in the temperature will be increased. This phenomenon occurs anytime a statistically stable process is adjusted incorrectly; it is referred to as overcontrolling a process. Whenever a process is overcontrolled, more variation will result. Another example is the stock market, someone makes a headline over a small drop in order to fill a news bulletin, this causes some panic selling and causes a run making the drop significant! If the production manager in the example had started pushing and pulling the production process, would this have impacted on the number of units produced and would it result in more variation? Absolutely!

Dr Shewhart developed control charts to understand the difference between common and special causes back in the 1920s, he recognised that this was fundamental to understanding processes and bringing about improvement. Control charts were popularised by Dr W. Edwards Deming and have been used extensively around the world.

Today data is everywhere, mostly languishing in databases and not being used. Control charts can bring data to life in a simple way and can increase understanding of systems and processes significantly.

REFERENCES:

Shewhart Walter A. *Statistical Method from the Viewpoint of Quality Control* Dover 1939

Juran J.M. *Quality Control Handbook* McGraw Hill 1951

Graham J.D. & Cleary M.J. *Practical tools for Continuous Improvement Volume 1 Statistical Tools* PQ Systems 2016

Kume H. *Statistical Methods for Quality Improvement AOTS* 1985

Kaoru Ishikawa *Guide to Quality Control* Asian Productivity Organisation, 1982

Wheeler D. J. & Chambers D. S. *Understanding Statistical Process Control* SPC Press, 2010

Say what! Conversations that get somewhere? - *A case study on: a refined strategy and framework for asking effective questions towards solving problems and making decisions.*

David Jago
Smart Meetings
M. Des.Studies, CToPF, AOQ, ILP

Brett Abraham
Sicame Australia Pty Ltd
B. Eng (Mech), AOQ, ASQ, CQIA

IN A NUTSHELL

What kind of leadership is needed in a modern world to manage Quality effectively? Despite what some may think, leadership is not confined to managers. Also, increasingly VUCA (Volatile, Uncertain, Complex and Ambiguous) times require new responses. Leaders must be able to respond with an open mind and heart, rather than just mechanically.

So this article is about developing an organisation's leadership at multiple levels. It is about building people's capability to identify and get on with improvements within their own power.

In so doing we go beyond the numbers and technical aspects to the human and system factors that make-or-break quality management.

Regardless of the technologies a company may be using, the reality is there is no escaping the need to engage with people. Reasons for this include:

- To gain and share information, knowledge and experience.
- To express wants and needs.
- To build relationships with stakeholders.
- To drive engagement.
- To communicate values, goals, expectations.
- To support change.

Using a case study from a small/medium scale enterprise, this article outlines a simple and practical framework for tailoring conversations so that they actually meet the needs of the stakeholders.

Continued from **page 29**

David Jago is the Principal Facilitator at Smart Meetings. In this case study his role is Process Owner. As the Process Owner, David is responsible for:

- Framing the case facilitation (the 'Discovery' phase)
- Designing the facilitation process (the 'Design' phase)
- Facilitating the workshop (the 'Delivery' phase)
- Working closely with the Case Owner to achieve good outcomes.

The first three elements are shown as "project phases" in Figure 1 - Project Phases.

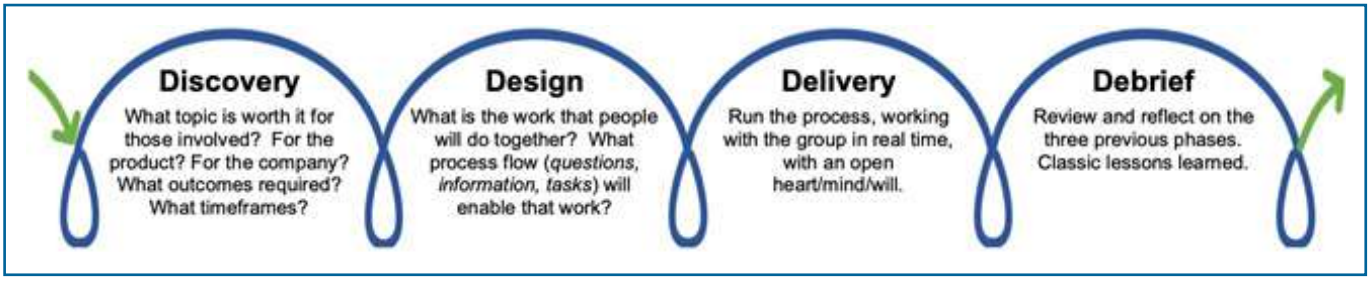


Figure 1 Project Phases

Figure 2 - Case study roles

Brett Abraham is the Quality/Environment Manager at Sicame Australia Pty Ltd. In this case study his role is Case Owner. As the Case Owner, Brett is responsible for:

- Framing the case topic
- Gathering background data relating to the case topic
- Identifying the relevant stakeholders and bringing them together for the workshop
- Assisting in the facilitation of the workshop as necessary and taking appropriate notes.

The relationship between the roles is illustrated in Figure 2.

It is important to note that group process facilitation is fundamentally content-less. That is, the facilitator is responsible for running the process. The facilitator does not have to be a subject matter expert. The participants are responsible for bringing their content. Together, they generate the outcomes.

BACKGROUND & MEETING 'DISCOVERY'

Sicame Australia designs, manufactures and supplies specialist electrical connectors, fuses and mechanical hardware. These are used on overhead and underground electricity distribution systems. Its advanced modelling, prototyping and testing facilities enable rapid product development and testing. This results in very short time to market. Additionally, Sicame is good at relatively small production runs to suit specific customer requirements. A small selection of Sicame's products is shown in Figure 3.

Figure 3 - Small selection of Sicame's product range

Sicame has a fairly traditional business structure, with the following work areas:

- Operations (Procurement, Production, Stores/Distribution).
- Engineering (Design/Development, Industrial Engineering, Maintenance, Quality/Environment).
- Finance.
- Sales/ Marketing.
- HR/Administration.

The case topic was triggered by a customer comment about excess grease on bolts causing issues in the field. As Brett delved into the matter a little deeper, it became apparent that there was more to it than just telling Production to use less grease. He initially identified several issues:

- The amount/s and application of grease varies across products and time.
- Sicame uses several greases (lanolin, Gadus, silicone), each with its own particular function.
- Housekeeping difficulties, with grease spills posing a potential slip hazard.
- Questions & issues arising include:
    - o The purposes for each of the greases
    - o Complications from having multiple greases (e.g., mix- ups, extra storage, lead times, cost/s)
    - o Why are there different greases on the one product?
    - o Consistency in using a particular grease across a given product range.

With this in mind, Brett convened a meeting – to be facilitated by David. It would discuss the topic of *"Getting the right grease in the right amount on the right bolt on the right product to customers".*

This meeting was intended to be an informal conversation, done in a focused way. The idea was to get input from key players, bringing together a broad range of wants and needs. It would work towards a consensus on what "right" means in this context for Sicame Australia.

The time available for the conversation allowed for little, if any, technical discussion of the why's and wherefores of what grease on what bolt. Indeed, too much detail would have obscured the overall picture. Rather, the conversation had to build a framework to guide and structure further technical detail and system application following the session.

Brett's preliminary work as Case Owner compiled the initial elements of that framework. David's work as Process Owner was to design a process resulting in an agreed framework and next steps.

MEETING DESIGN

The **design process** had five elements:

- First, refine the topic to be discussed. What, specifically, about the question of "getting the right grease on the right bolt for the right product" is worthwhile discussing?
- Second, identify the **stakeholders**. Whose needs and interests are affected by the topic? We had 10 participants in total representing Operations, Engineering and Sales/Marketing, with a spread of levels from manager to supervisor. This diversity was important because we intended to draw out a comprehensive range of stakeholder perspectives. Moreover, the depth of internal experience enabled a reliable gauge of external customer perspectives. When well managed and well-integrated, diversity makes outcomes significantly more robust and implementable.
- Third, articulate clear, specific, open-ended **outcomes**. What tangible product is required that will meet (enough) of those needs and interests? What thinking will make sure that product is robust and implementable? What 'gut/heart' experience will drive commitment and implementation? The conversation therefore had three design outcomes:
    - o *Practical*. To agree that the system of delivering the 'right' stuff can move from 'historical' to 'intentional'.
    - o *Rational*. To explore what constitutes "right", including the organisational roles involved in that.
    - o *Experiential*. Everyone both has their say and is heard by others.
- Fourth, specify **timeframes**. What is the "planning horizon" for the session? This is not applicable in this case. When and how long is the session itself? We decided on a 90-minute face-to-face session in two parts.

Continued from **page 31**

- Finally, design the actual **facilitation process**. This used the Technology of Participation™ (ToP™) Focused Conversation Method. This method employs a series of open-ended questions to guide the conversation towards the design outcomes. The underlying structure of the questions is shown in Figure 4.

MEETING DELIVERY

Due to late breaking COVID-19 restrictions, the meeting ended up being run as a hybrid of online and in-person. Several participants gathered with Brett in the Sicame boardroom. Others, including David, attended via Zoom. Computer screens were therefore the shared interface.

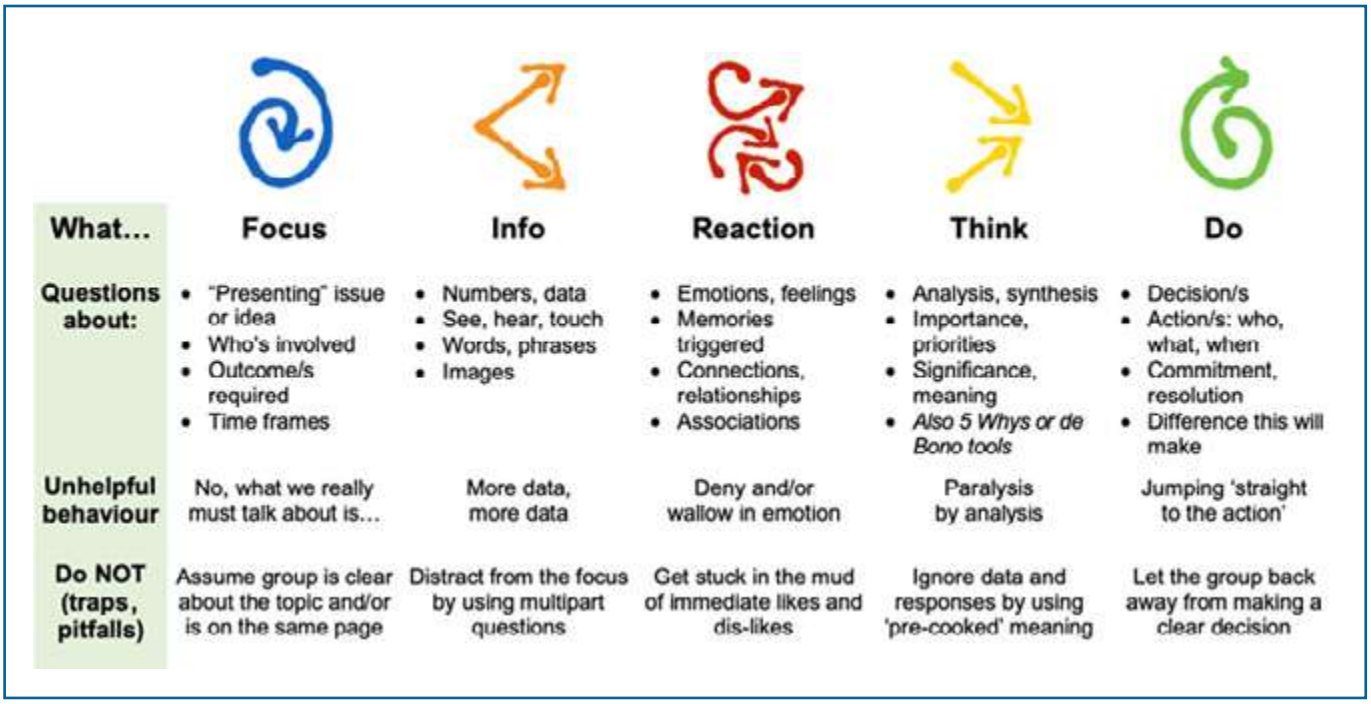


Figure 4 - The 5 Whats Framework

Brett opened the meeting with a precis of the topic background and importance, plus the overall aims of the meeting. David then outlined the facilitation process and launched into it. Brett recorded the questions and responses in real time.

The set of questions asked during the meeting is shown in Figure 5.

MEETING OUTCOMES

The meeting achieved several useful outcomes for Sicame.

Firstly, participants agreed to create a Product/Grease Matrix that shows the relevant products and what grease, why, where and the quantity required. Instead of products being developed in isolation, there will be a single document that summarises the products and their greasing requirements. This matrix will visibly identify any discrepancies, errors or omissions which can then be readily addressed. Further, the matrix will ensure understanding, knowledge retention and consistency, thereby providing savings in time and materials.

In discussing how the matrix would be maintained:

- Several processes would have to be developed and implemented to give effect to the Matrix. For example, a way to deliver the right amount of grease, all day, every day
- Various individuals took on roles towards building and/or maintaining the matrix
- This aligns with the intended Practical Result.
- Secondly, participants spent a large part of the conversation identifying knowledge and process gaps in the current system, en route to identifying the Matrix idea:
- On greasing bolts: underlying reason/s for particular applications, as well as the difficulties of accurate and repeatable measurement and application.
- On installation: poor practice/s by installers are outside direct Sicame control.
- Looking deeper, they articulated two system issues. These are that the system often relies on:
    - o Individual (implicit) knowledge rather than public (explicit) knowledge. (e.g., "If X leaves, we're in trouble!")
    - o Historical practice. (e.g., "That's the way we've always done it.")
- This aligns with the intended Rational Aim.
- Thirdly, participants felt that their contribution had been heard and valued. This was despite some of them being unfamiliar with this type of session and initially unsure of how to engage.
- This is a good result for the 'unfamiliar' participants, in that it will build their confidence to engage in future sessions and potentially learn how to lead them. Sicame will benefit from that enhanced capacity.
- This aligns with the intended Experiential Aim.

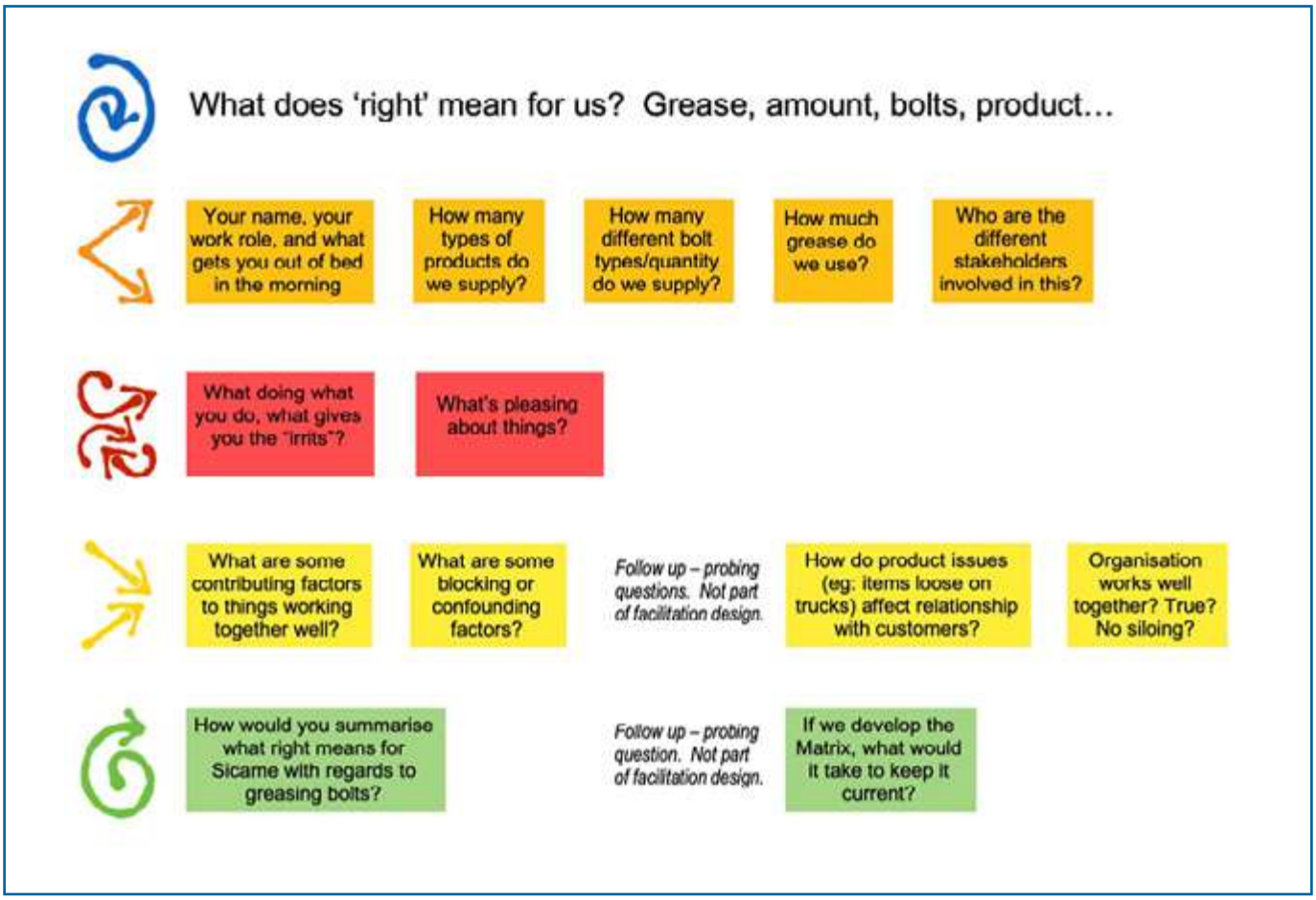


Figure 5 - Key questions asked

We ran a short de-briefing session a couple of weeks after the main session. It also used the '5 Whats'. This confirmed the outcomes and added further insights.

CONCLUSIONS

This case example shows that short, intentional conversations can have a real and positive impact on an organisation.

In all, the meeting took just over an hour. During this time, it:

- Established a broad base of factual information. (What Info?)
- Drew out gut reactions. (What Reaction?)
- Analysed both contributing and confounding factors in the situation. (What Think?)
- Identified a way to move forward. (What Do?)

This topic focused on what turned out to be a "system gap". Additionally, the conversation indirectly identified several leads for further investigation. These could be applications for the 5 Whats framework:

- Repeating the same battles over & over. Why is this so? E,g, organisation culture?
- Cartons deteriorating from the grease. What other factors? E.g., packaging?
- Potential to boost customer collaboration. E,g, installer training & feedback?

The conversation process engaged all the participants and stakeholders along the way, making the outcomes more robust, committed and implementable.

The descriptions of the Project Phases, and the Meeting Design in particular, show how Quality practitioners can do this for themselves.

The 5 Whats facilitation framework is built on the ToP™ Focused Conversation Method. The framework also references such well known tools as Toyota's 5 Whys and Lean's 5S format. In essence, the framework is straightforward, flexible and scalable. It has a lot of nuances available:

- It is straightforward in that the whole structure can be encapsulated in a simple graphic. The basic concept is crisp and clear. It is very learnable. As such, it is accessible to staff at all levels.
- It is flexible in that it is applicable to most if not all Quality topics. It can easily build in other frameworks beyond 5 Whys or 5S. It works across different types of conversation: mission and values; feedback, reviews or lessons learned; current situation analysis; strategies or initiatives; envisioning and/or outcomes.
- It is scalable in that it can address topics at different organisation scales, and group sizes from 2 to 200+.

What this means is that staff can have focused, productive and meaningful conversations on immediately useful topics and go from there. They can start as small as they like and build up as they need. It offers a high return on effort and time invested.

LEARN Q

Non-Technical Statistics to Support Process Improvement in Quality 4.0

Milton Krivokuca
DBA
E: mkrivokuca16@gmail.com

Milton Krivokuca is Interim Chair of the Master of Science Quality Assurance program at California State University, Carson, CA. He is past chair of ASQ's Quality Management Division, and an ASQ Fellow.

Statistical process control (SPC) is not an application of complex equations. The analysis of data requires human interaction. This paper addresses how SPC can support improvement in service or production processes.

Statistics is an intimidating, misunderstood, and undervalued data-driven method for assessing performance of any process. Statistics is fundamentally the science of applying a tool or equation to data sets for analysis. Statistics, commonly encountered in statistical process control (SPC) for analysis of current processes, can be applied to traditional product related services, as well as service-related processes. As it evolves, the digital society of Industry 4.0 will continue to rely on quality tools and methodologies to support organisational excellence. Quality 4.0 recognizes the expanding need for data analysis, and the quality body of knowledge is addressing these issues. When management can assess data in a context related to a specific process, informed and fact-based decisions can be realized.

Managers, especially managers involved in service-related industries, tend to think there is no need for the practical application of statistics for service-related processes. When asked about utilizing statistics, common responses include:

- We are a service provider and statistics have no value to us.
- We want to become a Six Sigma focused organisation, but there is no need to address statistics because we don't use them in our processes.
- Statistics are not a part of the Six Sigma Green Belt, only the Six Sigma Black Belt.
- Statistics only apply to high volume production and laboratories.
- We are getting along fine without them.

These responses are reflective of the many ways the use of statistics is misunderstood and undervalued. Statistical analysis includes numerous scientific and mathematical equations which, when applied and the results examined in context, can provide critical information for process analysis and fact-based decision making. This paper will address these biases by offering practical explanations and examples. The discussions in this paper are intended for nontechnical professionals who can benefit from the application of basic statistical concepts to support process analysis and every day decision making.

There are two distinctive statistical practices: inferential and descriptive.

- Inferential Statistics refers to the theory, methods, and practice of forming judgments about the parameters of a population, usually based on random sampling. These parameters are then used to calculate predictions
- Descriptive Statistics refers to the use of statistics to describe a set of known data in a clear and concise manner, as in terms of its mean and variance, or diagrammatically, as by a histogram.

Inferential statistics are commonly applied in a controlled or laboratory setting. The analysis is performed pre-production. By applying inferential statistics, the production process can be optimized. Descriptive statistics are used frequently for process analysis and data organisation. The tools and activities utilized by management, especially in service industries, are not always recognized as descriptive statistics. Service industries often associate statistics with product related processes. This misunderstanding leads to intimidation when the concept of applying statistics in service processes is considered. When the intimidation and misunderstanding of current statistical tools and techniques are effectively dispelled, professionals will be better able to analyze data.

The following mini-case study illustrates this common misunderstanding of statistical techniques:

- A call center team processes customer inquiries related to product performance, product information, product complaints, and technical support.
- The call center team consists of 5 employees who are from various generational and cultural groups. The company supports the generational mix to maximize the existing tacit company knowledge from experienced employees, while the digital natives can effectively communicate with most of the customers who are of Gen Y.
- The team leader, recently promoted from design engineer to business excellence team leader, is not comfortable with the overall department performance. As a design engineer, the new team leader is very knowledgeable about SPC, and SPC always has been a significant part of the design process. The team leader understands the value of SPC and feels that it can provide a basis for improvement in the call center. Due to COVID-19, most call center team members are working remotely. The team is no longer located in an office setting wherein face-to-face interactions and informal communications are an integral part of the working day. As a result, the team members are no longer operating as a true team. Recognizing that immediate action is required, the team leader prepares and sends a message to the call center team:

Team, we need to assess our performance in responding to customer inquiries and identify improvement opportunities. To develop fact-based improvement actions, a statistical analysis needs to be performed. We will apply descriptive statistics on critical performance indicators. Visual representation of data is an effective starting point. I am asking each of you develop cumulative frequency diagrams using rational subgrouping of critical performance data in nominal categories which, after analysis, can then be categorized in an ordinal manner. The first analysis of this data will take place during our team meeting next week.

- Each of the team members will react to the message based on his or her cultural or generational status. Common responses might be as follows:

  Fred (Boomer) – I have some questions about this assignment.

  Sue (Gen X) – Can we have a brief phone conversation about this assignment?

  Abdul (Gen Y) – I will begin working on it.

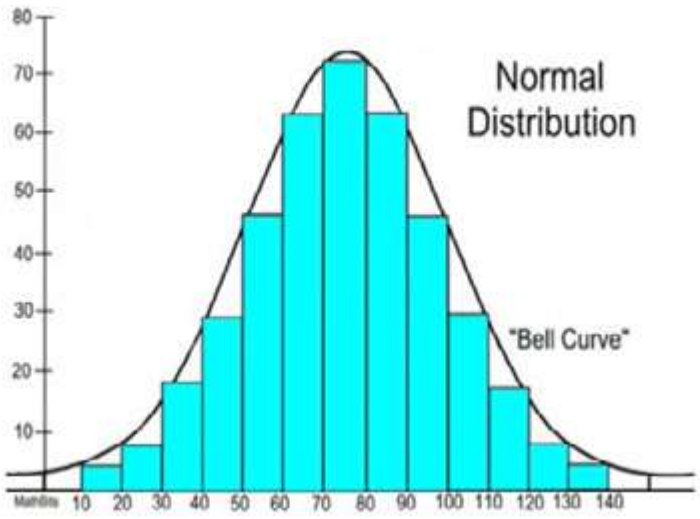
  Teresa (Gen Y) –WAIT, what?

  Adolpho (Gen Y) – IMPOSSIBLE! lol

  Adolpho (Gen Y) – IMPOSSIBLE! lol

Differences in the tone and structure of these responses are obvious. No disrespect is intended in any of the responses, and the format is representative of every member's generation and culture. The common point is that they do not understand what is being asked of them and are responding accordingly. The manager reflected a strong technical approach to data gathering for analysis using scientific terminology for fundamental descriptive statistics. The challenge is now for the manager to determine how to clarify the message for all to understand its importance. Let's deconstruct this message.

What is the team being asked to prepare?



Continued from **page 35**

A histogram, as identified in scientific terminology, is a cumulative frequency distribution. Histograms are commonly used for data evaluation but are rarely labeled as a cumulative frequency distribution in business.

Several other statistical concepts that have terms related to business are:

Once this basic understanding of statistics is correlated to common business processes, it can be converted from the technically focused wording the team leader used in the initial memo to more commonly understood concepts familiar to each culture and generation. The following is a restated memo from the team leader asking the for the same actions from the team members:

Statistics	Business
■ cumulative frequency diagrams	■ histogram
■ rational subgrouping	■ logical categories
■ critical performance indicators	■ KPIs
■ nominal categories	■ grouping data for analysis
■ ordinal manner	■ developing priorities for the data (Pareto)

Team, we need to assess our performance in responding to customer inquiries and identify improvement opportunities. To develop fact-based improvement actions, key performance data needs to be analyzed. Visual representation of data is an effective starting point. I am asking each of you develop a histogram of your individual KPIs. The first analysis of this data will take place during our team meeting next week.

This request is more reflective of the communications prepared in either a product focused process or service process.

The critical point of this example is that elements are already in place for implementation of fundamental statistical techniques for improved data analysis and decision making. The implementation of basic SPC can be accomplished using the following guideline.

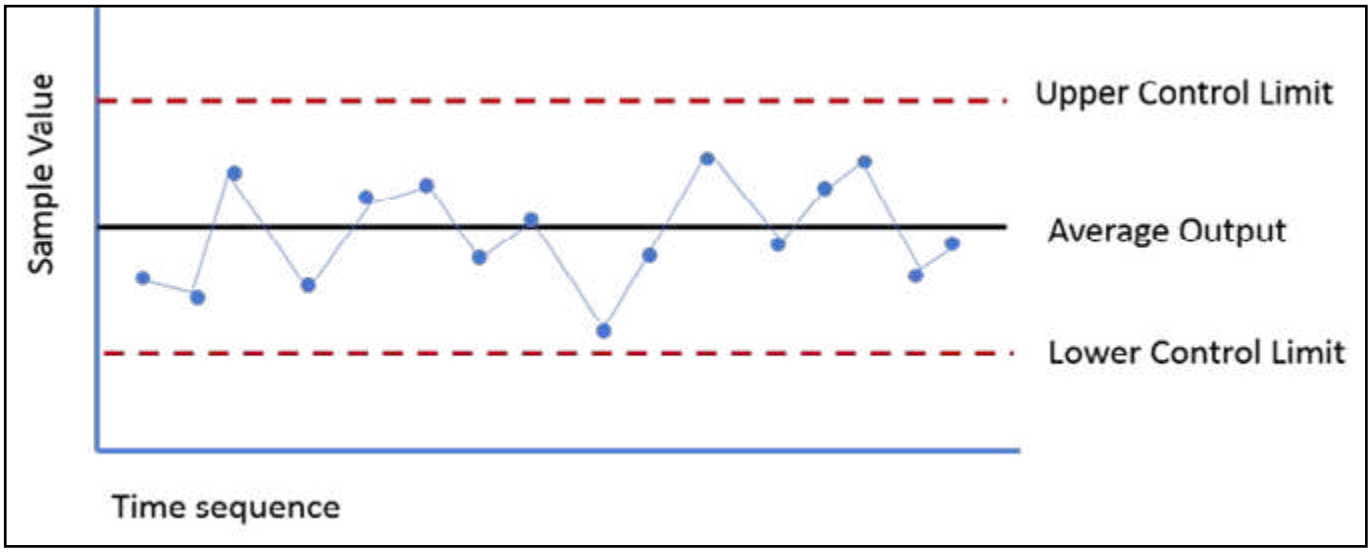
An implementation project champion should be identified. The department manager or team leader may not be the best individual to champion this process. A professional who understands the processes and has some knowledge of descriptive statistics may be a better choice to begin the implementation process.

The fact that histograms can be prepared indicates that basic data, generally acknowledged as department specific KPIs, are available.

This data can then be presented as a line chart. Review of the data, as displayed on the line charts, by those who are impacted by and contribute to the data points, such as the five members of the call center case study, leads to discussions and additional questions. It is important that this dialogue among the team takes place. Additional questions and different perspective will begin to develop.

At some point, these line charts can be advanced to include a centerline or mean. This centerline establishes a basis to visually observe trends and variation in the process. Discussion will continue to become more in depth as the team gets more comfortable with using line charts for analyzing data.

When the team becomes comfortable evaluating line charts, they are now in the beginning stages of applying SPC to the data analysis. Advancing SPC to the next step is developing a control chart. A control chart displays the natural process limits and amount of variation in a process. The data set that developed the line chart and average, is now applied to a formula that calculates a standard deviation, which is a measure of variation. These measures of variation establish the natural performance levels of the data set. These natural levels or control limits, as they are formally identified. Now a visual “picture” of the process performance and behavior is available for analysis.



A basic descriptive SPC is now in place. Control charts can be applied to any process where data such as KPIs are available. The team, even if they are non-technical, understands this visual display of performance behavior. The gradual implementation of this process develops the team's analysis of the data to more focused and in-depth discussions.

Managers would feel more comfortable if their teams understood basic descriptive statistics and utilized control charts for process analysis and decision making. Descriptive statistics is more in depth than the fundamentals discussed in this paper, but these fundamentals addressed in this paper can be applied in product and service-related industries. Through the use of statistics, process improvement and performance evaluation can be quantitatively examined.

Statistics are not as complex as they may appear. Simply stated, a fundamental understanding leads to successful implementation.

GROW Q

Datamining Compliance Gold

Sharon Manssen
BE Hons
Quality, Environment & Sustainability Leader, ANZ Region, Aurecon

An environmental engineer by training, Sharon Manssen developed ISO 14001-compliant Environmental Management Systems for clients before joining Aurecon's Quality, Environment and Sustainability team. The QES team maintains Aurecon's management system's ISO 9001, 14001 and 14064 certifications.

INTRODUCTION

I'm the Aurecon Quality, Environment and Sustainability Leader for the ANZ region. This paper is about our journey, in this age of digital information, to leverage the digital nature of our audit checklists and tools to generate compliance trends. Hopefully, you will gain some insights around how you can apply these ideas into your own business.

Aurecon is a global engineering and advisory service provider. We solve engineering problems and design large-scale infrastructure projects for a wide range of clients, utilizing specialist expertise from a wide range of staff from around the globe.

Like many companies, our business processes are becoming more digital, from the way they are mapped and accessed by users, to the way we communicate with our customers and even deliver some of our products. In fact, digital is our new normal: we use computer software to create complex engineering design solutions, we share these digitally with our clients. We collaborate with architects and contractors 'in the cloud'. For some of our projects nothing gets printed!

In the simplest of terms, what we produce is Intellectual Property captured in an electronic (or digital) format. So, we have:

service industries, are not always recognized as descriptive statistics. Service industries often associate statistics with product related processes. This misunderstanding leads to intimidation when the concept of applying statistics in service processes is considered. When the intimidation and misunderstanding of current statistical tools and techniques are effectively dispelled, professionals will be better able to analyze data.

The following mini-case study illustrates this common misunderstanding of statistical techniques:

1. *Digital Deliverables:* simple electronic formats (MS Word or Excel files, PDFs) through to 3D models, visualisation (fly-through) animations, simulations using Virtual Reality & HoloLens.
2. *Digital Systems* (e.g. the 'Digital Workspace' (a customised SharePoint platform) for project information management of MS Office-type deliverables (PDFs of reports & drawings); ProjectWise; BIM360; Synergy12D) which allow:

- Collaborative development of deliverables via shared documents.
- Approved Content Engines that control the metadata tagging of our information objects.
- Review, Verification & Approval workflows.
- Electronic transmittals.

3. *Digital Processes:* the Aurecon Methodology (intranet web pages):

So, how do we ensure that our staff can keep on top of our continually evolving processes and systems? How can we track that people are following our processes? This, of course, is where auditing comes in.

Our Audit Objectives are to:

- Measure the effectiveness of our systems and processes (i.e., do they support our objectives of producing both profitable and technically excellent work?).

Aurecon Methodology Compliance KPI	
Strategic Theme	Strategic sub-theme
Technical Excellence	1. Resources 2. Quality of outputs 3. Quality of inputs
Project Excellence	4. Project Governance 5. Risk Management 6. Project Controls 7. Continuous Improvement
Commercial Excellence	8. Contracts 9. Financial performance 10. Delegate approvals
Regulatory Compliance	11. Environmental 12. Safe Design 13. H&S
Strategic	14. Client Strategy 15. Digital 16. Eminence 17. Innovation 18. Offshoring 19. Sustainability

Figure 1: The Aurecon Methodology (AM) Compliance KPI

- Have a risk-based approach: to enable identification of where issues are occurring and determine the root cause (system, process, competency or other?) and therefore guide value-adding interventions.
- Have confidence that our sampling is representative (statistically significant findings).

THE AURECON METHODOLOGY COMPLIANCE KPI

To achieve these audit objectives, at Aurecon we have developed a data-driven approach to auditing, expressed as the Aurecon Methodology (AM) Compliance KPI. It is an indicator of process performance, which measures compliance with both mandatory and strategic requirements.

The KPI is built up of 19 subtopics, grouped into 5 main KPI topics (refer Figure 1).

In addition to assisting in measuring achievement of the Audit Objectives, the KPI also provides us with a measure of continual improvement trends, while promoting best practice and future readiness.

In addition to assisting in measuring achievement of the Audit Objectives, the KPI also provides us with a measure of continual improvement trends, while promoting best practice and future readiness.

THE HOW

In a nutshell:

- Audit checklists (of varying scopes) are built in our SharePoint audit database. This enables all responses to be captured as data.
- The results are exported for analysis (into Excel). Here's the GOLD of my title: every single audit question is 'tagged' to one of the 19 compliance KPI topics, as well as to the process step in the Methodology.
- The responses can be consolidated across checklists then 'sliced and diced' as required.

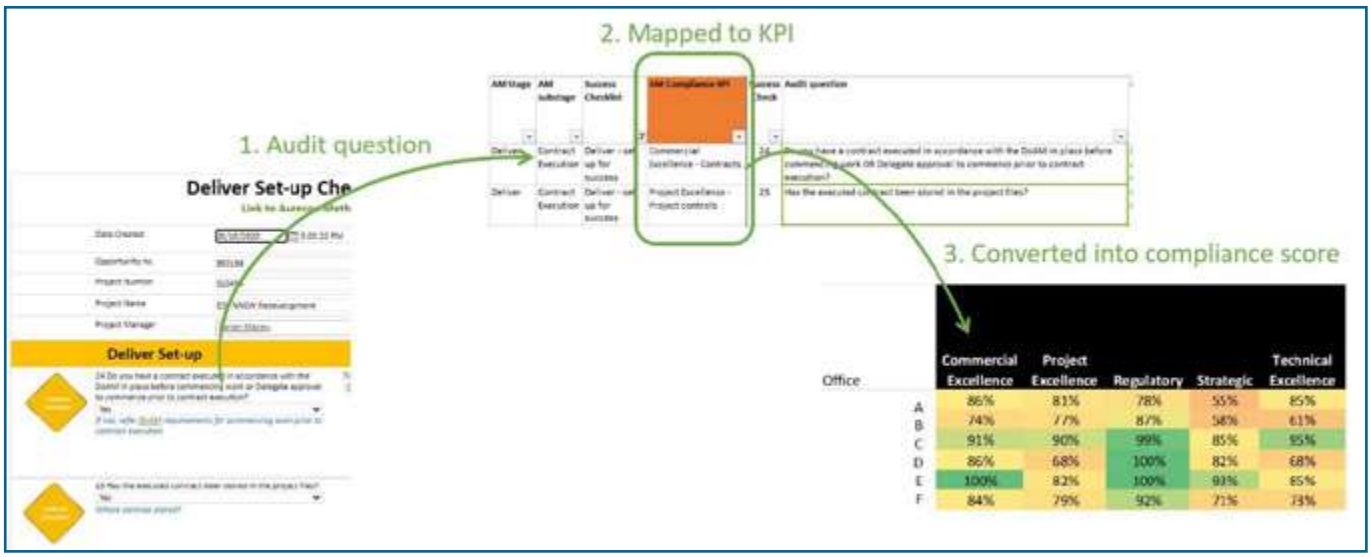


Figure 2: Generation of the AM Compliance KPI

Continued from **page 39**

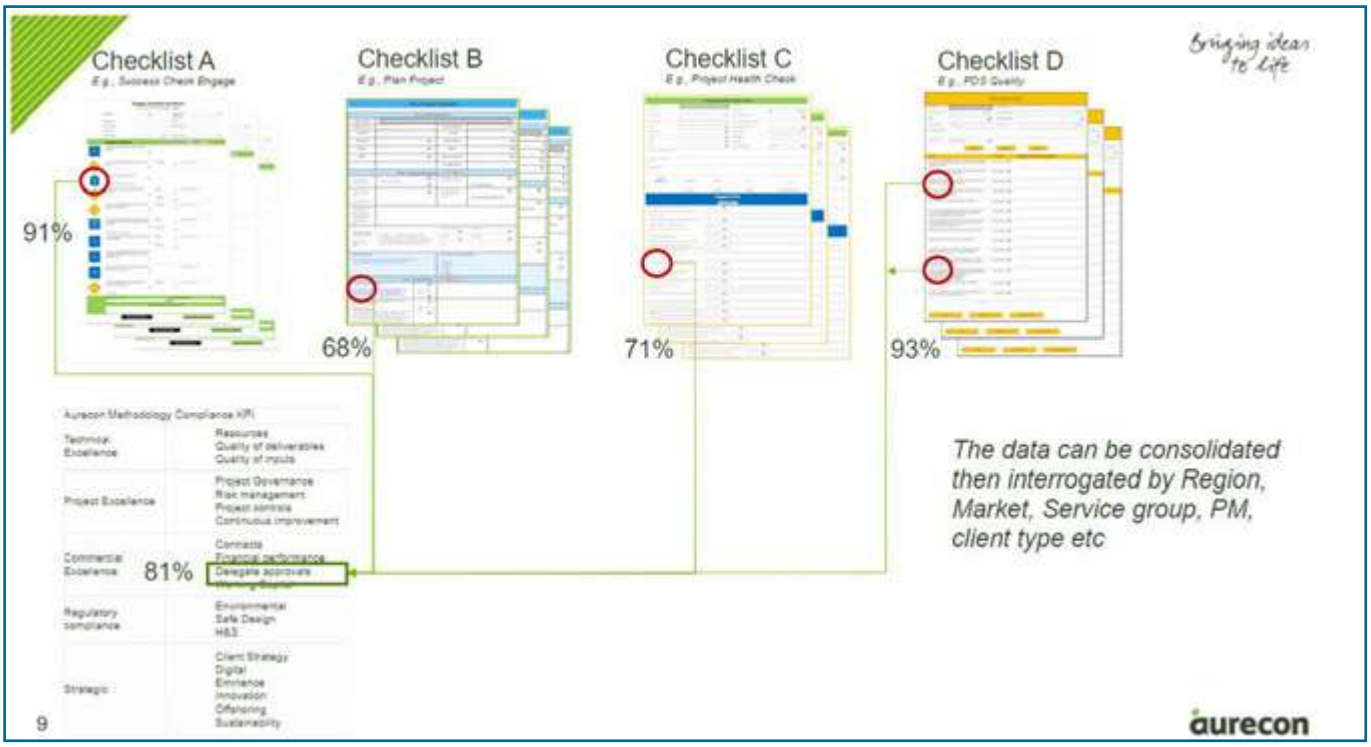


Figure 3: Example of build-up of each sub-element of the AM Compliance KPI

In more detail:

- Every single audit question, from every single checklist, is mapped to one of these 19 sub-themes.
- The response to the question generates a score: Yes = 1, Partial = 0.5 and No = 0. N/As are excluded from the calculation.
- The scores are converted into a % compliance.

The scores can be consolidated across checklists, then analysed for trends. This is illustrated in Figure 3, for all requirements related to 'Delegate Approvals':

1. Our procedures require the correctly authorised delegate to approve numerous decisions in relation to financial matters, such as to proceed with bidding on work, to commence work in advance of a signed contract, to spend a certain amount on a bid, to engage a subconsultant, etc. Thus the 'Delegate Approval' metric is generated from requirements across the lifecycle of the Methodology.
2. Checklist A captures compliance with requirements at the 'Engage' (client engagement) stage of our methodology. Checklist B at the project planning stage, Checklist C is a high-level checklist across all stages of the Methodology, and Checklist D is a tailored checklist for a specific client.
3. In this example, assume that each checklist contains between 1 and 3 questions mapped to the 'Delegate Approvals' metric, and that 10 checklists have been completed for each. The compliance score is 91% for Checklist A, 68% for B, 71% for C and 93% for D. Overall, this averages to 81%.
4. However, the data can be interrogated by Service Group (Unit), by PM, by client, by region etc, using Excel functionality of pivot tables and slicers.

RESULTS AND APPLICATION

So, how are we applying this information? First of all, let me clarify that it's still early days – we're still working this out! But here's some early applications that we've identified (refer to Figure 4):

1. We're able to identify improvement areas by KPI themes or by KPI – we can break this down to business unit or even an individual project manager.
2. One group of KPI themes are strategic initiatives, so we can use the KPI as a measure of how well these are being embedded into our day-to-day business.
3. Similarly, we can identify improvement areas by business process (refer to Figure 5).

For low-scoring processes or KPIs, we conduct a root cause analysis, and then implement initiatives to drive improvements. Some typical improvement actions are:

4. Running awareness campaigns (Quality shares, slots in team/unit meetings explaining the process, Lessons Learnt session).
5. Directing people to attend refresher training.
6. Directing staff to connect with the right people (e.g. Digital Practice Leader to help with setting up a Digital Work Plan).
7. Updating our procedures to provide better guidance.
8. Improving our systems and tools.

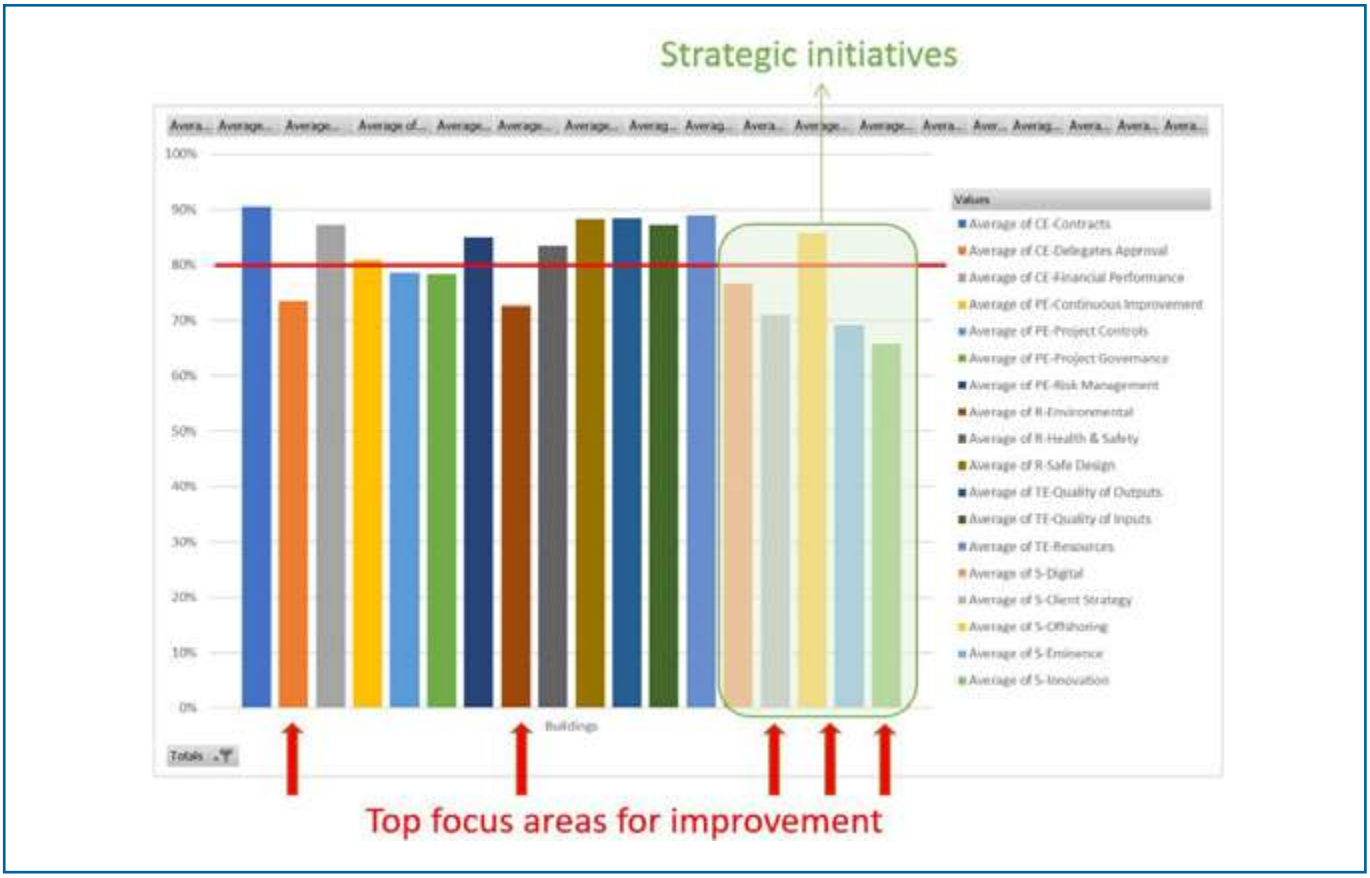


Figure 4: Compliance by AM Compliance KPI metric

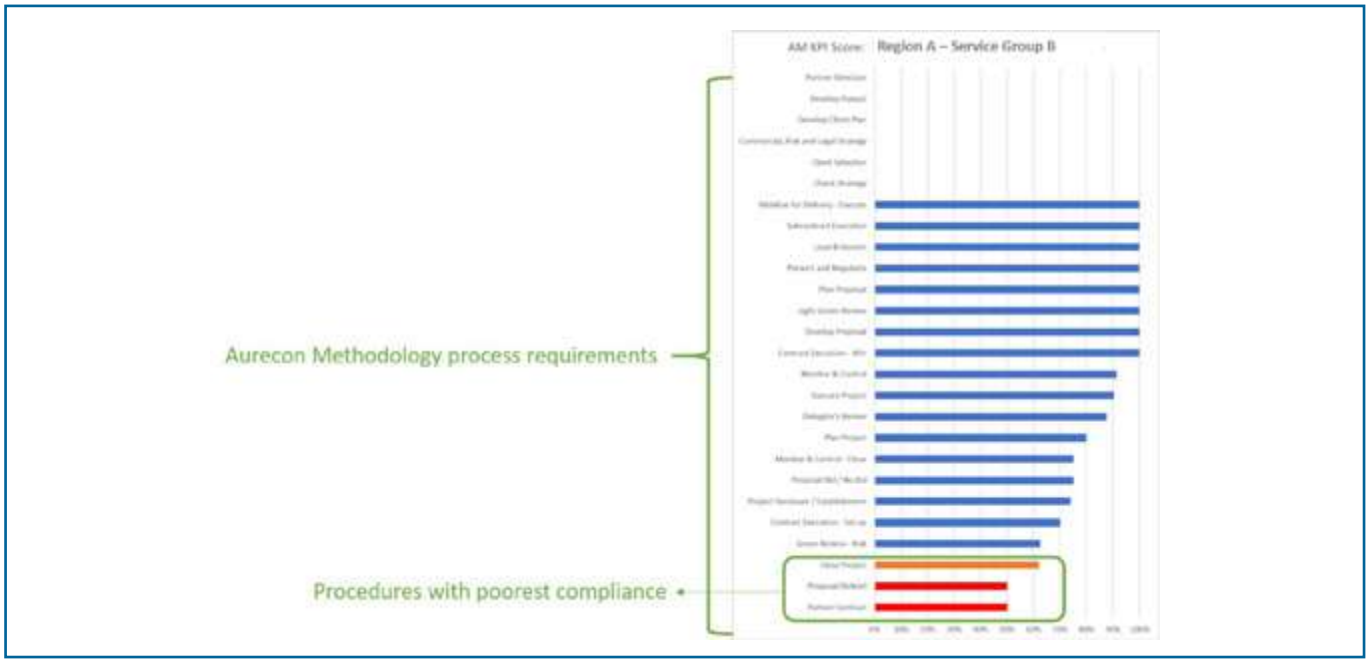


Figure 5: Compliance by business process requirement

CONCLUSION

There you have it: how we are using digital data to measure compliance to help us focus on where our biggest risks are and determine the effectiveness of our Quality Management System. I hope you got something out of this paper that you can apply in your own company.

Reimagining the Future of Leadership: Building Human-Centered, Intelligent Organisations

Dr Rey B. Fremista

Dr. Rey B. Fremista is the current President of the Philippine Society for Quality and was recently elected as an Associate Academician at the International Academy for Quality. Dr. Rey is also the AVP for Lean Digital Transformation at Genpact and a Professorial Lecturer (MBA Program) at the Polytechnic University of the Philippines. He is also one of the Presidential Appointees of the President of the Republic of the Philippines to be part of the Philippine Quality Award Executive Committee. He can be reached at: rey.fremista@yahoo.com

Metaverse. AI and machine learning. IoT. Blockchain. Augmented and virtual reality. Quantum computing. HyperAutomation. Intelligent and cognitive process automation. Internet of behaviors (IoB). And so on…

The list of emerging technologies in the current era of Industry 4.0 is long which also shows how much all the spheres of human civilization have progressed over time. We have a long, hard road of evolution before we reach to the present time.

A GLANCE OF THE GLORIOUS PAST

Let's have a quick glance of our evolution of work and see where this might be going.

The Industry 1.0 happened sometime in 1800s where energy production was introduced through steam power and water sources; in other words it was made possible through mechanization. This era was the transition from agrarian and rural towards European industrial society (Balasingham, 2016). Critical advancements were observed as well as on transportation and communication (Rifkin, 2016). This was also the period where the Welsh textile manufacturer, philanthropist and social reformer Robert Owen formulated the radical idea of ending the abusive practices of the day (people usually worked from ten to sixteen hours for six days a week) with this slogan: "Eight hours labour, Eight hours recreation, Eight hours rest."

The next era in the late 1800s, Industry 2.0 was triggered by electrification as a primary source of energy (Rifkin, 2016) that enabled industrialization and mass production. To cut the story short, less and less human effort was required because of the electricity-supported machinery. It was also during this era when the Ford Motor Company took the major reform of doubling pay of their workers to $5 a day and cut the standard work day to eight hours. This boosted Ford's productivity and the company profits went from $30 million to $60 million in two years.

Industry 3.0 came into picture when computers were built but as Sharman (2018) argues that it took several years before they became more reliable. This era was the introduction of the modern-day outlook to automation and the emergence of digital revolution – it's a transition from an industrial landscape to information era, which enabled an IT-facilitated manufacturing automation (Preuveneers & Ilie-Zudor, 2017).

FAST-FORWARD TO THE PRESENT

And now, we have the Industry 4.0 which started as a strategic initiative of the German government, that was first presented at the Hanover Fair sometime in 2011 (Rojko, 2017). The main idea is to explore the potentials of emerging technologies and concepts such as availability and use of the Internet and Internet of Things (IoT), integration of technical processes and business processes in the companies, digital mapping and virtualization of the real world, and

the 'Smart' factory including 'smart' means of industrial production and 'smart' products. Bordel et al. (2019) share that this new era refers to a new technological revolution based on cyber-physical systems, which are the unions of physical and computational processes, which will then be employed to create innovative and efficient control applications. These innovative solutions will be implemented in every system, solution, or infrastructure of future society.

Industry 4.0 and digital transformation have been the buzzwords that the business world has been using for some years now. Almost all industries recognize the need to jump into the bandwagon to transform their organisations to deliver seamless customer experience, improved business processes, new products and services, and to transform the culture of the organisation where agility and innovation are fostered.

During this pandemic, we saw the acceleration of the implementation of these digital transformation initiatives utilizing the Industry 4.0 emerging technologies. As a matter of fact, the McKinsey survey (McKinsey & Company, 2020), in which 899 C-level executives and senior managers participated, representing the full range of regions, industries, company sizes, and functional specialties) concluded, "…responses to COVID-19 have speeded the adoption of digital technologies by several years" and they are projecting that these changes could be here in the far future.

Leaders were forced to review their policies and processes to continuously serve their customers, to ensure that business operations are functioning the way they were designed to function, and to literally thrive as a lot of companies were negatively impacted by the crisis. Leaders in the new normal recognize that for us to stay in business arena and to be as competitive as we can in the new playing field, we need to challenge our paradigm and re-imagine what would it take for us to become successful in the long run, creating that sustainable growth.

REIMAGINING THE FUTURE

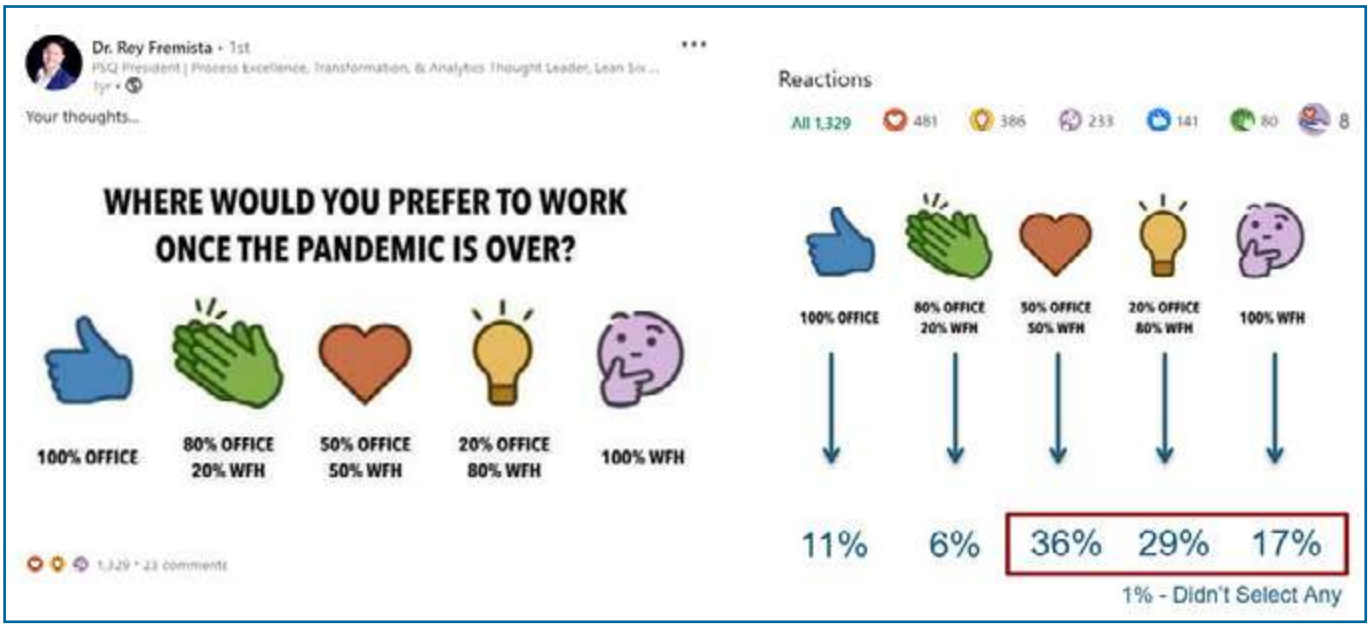
How we work. Decades ago, executives would have their **personal assistants** (and by the way there are still some these days). Around 2000, these personal assistants and secretaries jobs became redundant. We already have some powerful tools like Microsoft Office that helped us as leaders to do scheduling very quickly, typing, printing, and other office tasks. What's the future for us leaders in this space? The future will be **RAs – Robotic Assistants!** I know that we've been using Alexa, Siri, and similar applications but we haven't fully maximized them yet such that we haven't integrated them yet in our daily routine. According to a study by Cognizant's The Center for the Future of Work (2016) in which they asked around 2,000 senior leaders from around the globe: "What skills will they need in 5 years" and all of their answers revolved around human skills; their study showed that they needed an average of 15% more of those human skills. If you would think about it, why not utilize these intelligent RAs (the Alexas or Siris of the world) to do your other tasks so that you can give time to developing more human skills?

What we use at work. In the 1970s, we had the mouse from the innovation of Xerox and a few decades later, we've seen the emergence of smartphones! From tapping the keyboard, these smartphones gave way to our thumbs, our fingers – from t**yping to swiping on the touchscreens** and touchscreens have been expanded to other things like to our cars, to the banks, hotels, restaurants, and to most of the industries that call for digital interaction. But what's the future – because we're all stuck using our fingers, swiping and zooming and typing? **We might switch to screenless, touchless future**, so that we can appreciate what's important to us because of these viruses. We're more hygiene conscious now as compared to years ago. What's going to be in are the voice-enabled devices. Us, as leaders, we need to be able to shift and lead by example especially in this era of digital transformation. Why type your text messages when you can dictate them via the voice-to-text function om today's smartphones? When you say we support **voice-enabled devices**, do it! Do it, because unconsciously, our people will notice that we don't do what we preach.

How about in terms of connectivity? As they say, the higher the G the faster the connection! **1G** phones let us talk to each other, the **2G** phones let us send messages, and **3G** phones provided us the mobile internet, and the **4G** made everything a lot faster. And that's what we usually use today to stream in YouTube, to listen to podcast channels, access your Spotify and watch in Netflix, share contents in your Tiktok account, and so many more. And us as leaders, we totally understand how important this 4G is in our lives – in managing our work, in improving customer experiences and also our processes. And now, there's the introduction of **5G!** The advent of 5G massively accelerates the data transmission speed generated from a 4G network. 5G is said to be 10x faster than today's cable internet and 100x faster as compared to our current 4G phones. What's does it mean to us leaders? It means that our interaction with our people will have no delay at all – it will be more real time. This will also amplify other technologies like IoT and AI many times which means we can expect more cashierless stores like Amazon Go in the near future, higher level of precision in and insight from manufacturing processes, and so forth.

The style at work. Can you imagine previously going to your office not in your suit or in your **office, formal attire, or uniform** (even if you needed to commute to work in hot, humid weather)? What's the future? **More employees might be wearing t-shirts or hoodies, working from elsewhere**. And companies and leaders will look for skills, will look for the creatives, the innovators, the disruptors, the problem solvers who are comfortable working from wherever they want to. Imagine working with your people in t-shirts and hoodies. Perhaps you might want to also! (especially because this working from anywhere and maybe hybrid setups will go on for much longer). In October 2020, I posted this survey in LinkedIn: *Where would you prefer to work once this pandemic is over?* (See the Figure on pg 44). The results from 1,329 respondents: 36% said that would want to work 50% in the office, and 50% at home; 29% said that they would want to work 20% in the office and 80% at home and 17% said 100% work from home. Times have changed and this is what we will expect to lead in the nearest future.

Continued from **page 43**



Where would you prefer to work once this pandemic is over?

So, 83% to work substantially from home **(#WFH)**. But the future is work from anywhere! **(#WFA)**. Forward-thinking leaders don't miss the physical presence of their employees as long as employees deliver what should be delivered. With the emergence of so many collaboration and productivity tools these days, working from anywhere is totally feasible. On the other hand, I'm imagining, while we see a lot of good benefits of this work arrangement, we, as leaders need to step back and think about the culture. Imagine that **culture** that you would want to establish in the era of work from anywhere.

What we experience at work. A few years ago, the first thing that we looked for in a café or in a coffee shop or in a hotel was the FREE WiFi, right? Today, we no longer look for it because we know it's there. And we are all surrounded with WiFi and data from our mobile devices like we've gone crazy over these things. But remember that too much of a good thing is a bad thing. We are becoming like slaves of these WiFi, internet, and all these technologies. **The future will be about digital detox** – free from these noisy technologies. The future will offer digital sabbath to give our employees and leaders time to breathe and disconnect and switch off and take care of our mental health. The future will be about having that real, meaningful conversations with the people that we love outside the office and also with our employees at work – connecting with them on a deeper, profound level.

The purpose why we work. We were nurtured that we have to be very professional on the way we communicate and write – our communication must be uniform and consistent but it's so dry, isn't it? Nowadays, emojis, abbreviations, and GIFs are everywhere that convey thoughts and emotions. The future will be leaders understanding that employees can express themselves differently and a lot of millennials and GenZ-ers are into using these new symbols of communicating to express their point of view (POV). Leaders should not misinterpret that they're not serious. They are serious – it's the way they're presenting their POVs that's quite different than what we used to. The future of work is calling for authenticity and transparency and that's what we need as well – authentic leadership.

Let's look at career. **Gone are the days when you want to stay in one company for 10 years or 15 or 20 years for a specific career.** It's a thing of the past. With the emergence of advanced technologies, you must be prepared to doing multiple careers, and that's the future – because of these automations that will take away some job possibilities, but many more new jobs and careers have yet to be created that will provide tremendous opportunity for employees to create a diverse portfolio of careers and roles. These will be the employees of the future and as leaders, we need to be multi-faceted too and open to explore new things.

Another thing that the future will bring is that there will be more female leaders, female leaders who are fierce, who are fearless, women CEOs, women who are equal with men. Future will be about the equality between men and women.

WHAT IT TAKES TO LEAD IN THE FUTURE

A study called "The New Leadership Playbook for the Digital Age: Reimagining What It Takes to Lead" (Reay et al. 2020) provided a warning to today's leaders, "Although a significant segment of the current generation of leaders might be out of touch, they still have control — over strategic decisions, who gets hired and promoted, and the culture of their organisations — but not for long. The need for change is urgent, and time is running out for leaders who are holding on to old ways of working and leading." In addition, one of the findings of this study is that certain leadership behaviors and attributes have withstood the test of time, regardless of the respondent's country, age, cultural context, or industry: **honesty, integrity, inspiration,** and **trust.**

The table below shows another output of the said study – leadership behaviors are categorized as **eroding, enduring**, and **emerging**. The idea is for leaders to strengthen emerging and enduring leadership attributes and discard behaviors that are eroding in value.

"Eroding" leadership behaviors are those leadership behaviors that are considered effective in companies in the past but are now

considered detrimental; "Emerging " leadership behaviors are those behaviors that have been on the radar for the past 5 years but are now considered highly important for a leader to be considered effective. And "Enduring" leadership behaviors are those attributes that have always been considered important to the organisation and are still important today and in the future.

THE BOTTOMLINE

And this is where we are now! In this world, the name of the game is being agile! Being fast – we as leaders have to be able to pivot as quickly as possible to survive in this era and open the door of Industry 5.0. We have to be able to establish structures that can change if we need to or else others will do that, and next day, you're gone in the market. We need to mobilise the flexible and sustainable execution engines – engines that will work for us to achieve our objectives and transform our organisations that are ready to grasp a more ambiguous and volatile future. Remember, "In the new world, it's no more about big fish eating small fish – but the fast fish eating the slow fish." The rules of the game have changed and so we too have to change.

Eroding	Enduring	Emerging
Asks for permission	Creates a clear vision	Is purpose-driven
Has no-exception protocols	Focuses on performance	Nurtures passion
Reinforces command and control	Maintains a profit orientation	Makes data-driven decisions
Manages top-down	Is customer-centric	Demonstrates authenticity
Avoids transparency	Leads by example	Demonstrates empathy
Micromanages	Demonstrates ethics and integrity	Employs an inclusive approach
Creates rigid long-term plans	Takes risks	Shows humility
Takes a one-size-fits-all approach	Leads change	Works across boundaries

Table Source: D. Ready, C. Cohen, D. Kiron, and B. Pring, "The New Leadership Playbook for the Digital Age," MIT Sloan Management Review, January 2020

No matter what view of agility we're trying to design or new organisations we're trying build, never ever forget that it's all about understanding PEOPLE! People should always be at the center – the humans should be at the heart of those futures. Leading tomorrow's world will be about building conditions for success so that our people can deliver deeper value, contribute their best efforts to a common cause.

REFERENCES

Balasingham, K (2016) *Industry 4.0: Securing the Future for German Manufacturing Companies*. University of Twente, Twente

Bordel, B, Alcarria, R, Sa´nchez-de-Rivera, D, Robles, T (2017) Protecting industry 4.0 systems against the malicious effects of cyber-physical attacks. International Conference on Ubiquitous Computing and Ambient Intelligence. Springer, Cham, pp. 161-171

Ready, D, Cohen, C, Kiron, D, and Pring, B (2020) T*he New Leadership Playbook for the Digital Age* MIT Sloan Management Review, January.

McKinsey & Company (2020, October 5) *How COVID-19 has pushed companies over the technology tipping point—and transformed business forever.* https://tinyurl.com/svkx4w

Roehrig, P and Pring, B. (2016) *The Work Ahead: Mastering the Digital Economy.* Cognizant The Center for the Future of Work.

Preuveneers, D, & Ilie-Zudor, E (2017) The intelligent industry of the future: A survey on emerging trends, research challenges and opportunities in Industry 4.0. Journal of Ambient Intelligence and Smart Environments, 9(3), 287–298. https://doi.org/10.3233/AIS-170432

Rifkin, J (2016) How the Third Industrial Revolution Will Create a Green Economy. New Perspectives Quarterly, 33(1), 6–10. https://doi.org/10.1111/npqu.1 2017

Sharman, J. (2018). Four phases of industrial revolution: Phase three [Technology platform]. Retrieved February 23, 2019, from NBS website: https://www.thenbs.com/knowledge/four-phases-of-industrial-revolution-phase-three

SHARE Q

Quality 4.0 Takes More Than Technology

José Benito Flores Juarez
Universidad de Monterrey, México.
benito.flores@udem.edu

Benito Flores is Director of Development at the Universidad de Monterrey (Mexico), where he also teaches and previously served as Quality Director and Engineering Dean. In 2019 he served as Chairman of the Board of Directors of the American Society for Quality (ASQ), and is a current member of the Board of Directors of the Asia Pacific Quality Organisation (APQO).

Jan Nöcker
Boston Consulting Group, Hamburg
Noecker.jan@bcg.com

Jan Noecker is an Associate Director at the Boston Consulting Group's Hamburg office. His focus is on advanced manufacturing with special focus on quality, which he co-leads globally at BCG. He has co-authored the study "Quality 4.0 takes more than technology" published by BCG, DGQ and ASQ.

IS TECHNOLOGY A SILVER BULLET FOR IMPROVING QUALITY MANAGEMENT?

New technologies have emerged to address the challenges of quality management at the same time that quality has gained importance on the corporate agenda.

A study conducted in 2019 by Boston Consulting Group in partnership with ASQ and Deutsche Gesellschaft für Qualität (DGQ), sought to better understand technology's role in addressing the imperative to transform quality management. The study focused on the opportunities and challenges arising from Quality 4.0—the application of Industry 4.0's advanced digital technologies to enhance traditional best practices in quality management. Participants in the study were over 220 leaders from producing industries, covering most industry sectors such as industrial goods, consumer goods and healthcare, and coming from many different countries but with special focus on the US and Germany.

Quality 4.0 is among the many developments that are giving rise to the "factory of the future," in which digitally enhanced plant structures and processes increase productivity and flexibility in the factory and throughout the supply chain. Digital technologies can help improve quality in various ways. For example, companies can monitor processes and collect data in real time and apply analytics to predict quality issues and maintenance needs. Digital tools also enable people to do their jobs faster, better, and at reduced cost.

The study confirmed that technology is only one piece of a broader quality transformation that must also focus on people and skills. Although companies recognize that Quality 4.0 can create substantial value, few have defined a detailed strategy and launched an implementation program. Participants in a survey conducted as part of the study identify a shortage of skills as the main impediment. Notably, participants regard soft skills as the most critical skills for success, even as they acknowledge the need to improve their analytics and big data skills.

Taken together, the findings point to the need for companies to accelerate their adoption of Quality 4.0. Success requires a multifaceted approach that addresses the full range of strategic, cultural, and technological issues. Companies that master the challenges will be rewarded not only with lower defect and failure rates but also with competitive advantage in the form of greater customer satisfaction and improved operational efficiency.

QUALITY 4.0 DRIVES IMPROVEMENTS ACROSS THE VALUE CHAIN

Survey participants acknowledge the importance of Quality 4.0 at all stages of the value chain. (See Exhibit 1.) Nevertheless, they see manufacturing and R&D as the areas that will benefit most from

Exhibit 1: Survey Participants See Quality 4.0 as Important Across the Value Chain

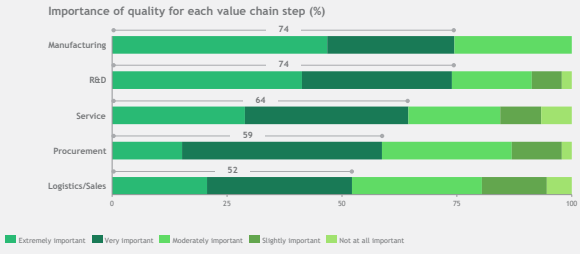


Exhibit 1

improved quality. The perceived importance to manufacturing reflects the visibility of value created on the shop floor. Participants also recognize the benefits of applying Quality 4.0 in R&D to improve design and embed quality into new products, and they understand the opportunity to capture quality-related improvements in value chain steps that are traditionally viewed as being outside the scope of the quality function, such as logistics and sales.

In the subsections that follow, we discuss the top use cases that survey participants have identified (See Exhibit 2.) for manufacturing and R&D as two areas of the value chain.

Exhibit 2: Quality 4.0 Top use cases

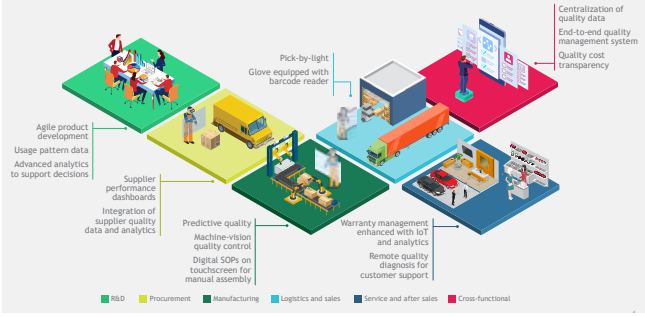


Exhibit 2

Manufacturing. Survey participants consider predictive quality, machine vision quality control, and digital standard operating procedures (SOPs) to be the most important use cases in manufacturing. Predictive tools give manufacturers unprecedented power to analyze massive amounts of data and discover correlations between critical variables. These insights enable companies to address the root causes of problems preemptively—before quality issues occur. Compared with manual inspection processes, machine vision technologies are less expensive to use and more effectively verify quality or detect quality issues at early stages of the production process. For their part, digital SOPs ensure that workers have the most up-to-date instructions.

R&D. Companies can use Quality 4.0 technologies such as simulation testing and artificial intelligence (AI) to improve a design's robustness. For example, AI supports failure mode and effects analysis. By enabling and improving preventive quality, this use case helps eliminate potential failure points in the design of a product or process. In addition, companies can work with usage pattern data that sensors connected to the Internet of Things (IoT) capture to improve the design of future products in ways that enhance quality by preventing failure.

Survey participants consider agile product development to be the most important use case in R&D. Digital tools for virtual design are important enablers of agile since they promote quality by accelerating test cycles and making field data more accessible.

Cross-Functional. The most important use cases involving cross-functional collaboration, according to survey participants, are centralization of quality data, an end-to-end quality management system, and quality cost transparency. A company must combine data sets from the quality systems of multiple functions to generate insights and address critical pain points across functions.

THE STATUS OF ADOPTION

Nearly two-thirds of survey participants believe that Quality 4.0 will significantly affect their operations within five years. Nevertheless, relatively few companies have made substantial progress toward adopting Quality 4.0 systems.

Among all survey participants, only 16% say that their company has started to implement Quality 4.0 (we refer to these companies as *frontrunners*); only 20% say that their company has started to plan for implementation, and 63% have not even reached the planning stage yet (we refer to these two categories of participants as *followers*). (See Exhibit 3.)

Exhibit 1: Survey Participants See Quality 4.0 as Important Across the Value Chain

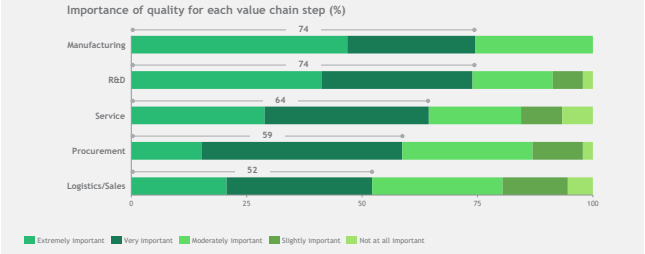


Exhibit 3

Consistent with the slow start that we observed across the survey sample, relatively few participants say that their company is prepared to implement Quality 4.0. Only about one in four say that their company possesses a detailed digital transformation strategy and roadmap or has state-of-the-art knowledge about Industry 4.0.

Only one-third of participants say that they understand how digitisation will change quality management roles and skills. Even fewer participants believe that their company has the right people in place to run a Quality 4.0 initiative (17%) or has a clear strategy for attracting Quality 4.0 talent (5%).

Continued from **page 47**

About half of all survey participants say that they dedicate less than 2% of their quality management full-time equivalents (FTEs) to Quality 4.0 initiatives. In contrast, best-in-class companies dedicate 10% to 20% of such FTEs to Quality 4.0 initiatives, according to the experts we interviewed.

THE SIZE OF THE PRIZE

Why are companies implementing or considering Quality 4.0? Survey participants selected improvements to three quality topics as their top reasons: performance, responsiveness (that is, the ability to react quickly to quality problems and changes in consumers' preferences), and productivity. Participants' top three metrics for assessing improvements are manufacturing quality (for example, first-pass yield, scrap rate, and rework), the impact of poor quality on customers (for example, rejects, complaints, and warranty claims), and the monetary cost of poor quality.

Exhibit 4: Frontrunners Have Lower Expectations for Improvements, Reflecting the Challenges of Implementation

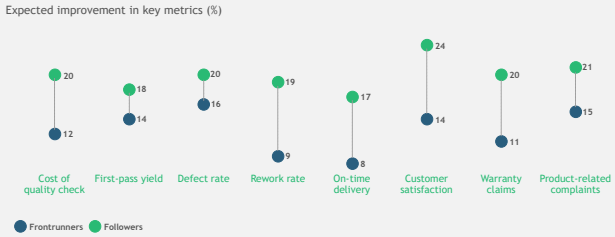


Exhibit 4

Participants recognize that Quality 4.0 can promote significant improvements in key quality metrics. Notably, however, we found that frontrunners tend to have lower expectations about the magnitude of such improvements than followers do. (See Exhibit 4.) This finding likely reflects the fact that frontrunners have bumped up against real-world challenges to implementation.

OVERVIEW OF THE CHALLENGES

Survey participants identified factors unrelated to technology and data as the most significant challenges to implementing Quality 4.0. A shortage of digital skills and talent ranked as the top challenge. An unclear digital strategy ranked second among the most important barriers to implementation, and lack of quality culture ranked third.

Frontrunners and followers differ in their opinions about the biggest challenges. Although both groups cite a shortage of digital skills and talent as the number one challenge, frontrunners see this factor as a more significant barrier. The next three most important barriers for frontrunners relate to technology or data: outdated systems, fragmentation of quality data, and data integrity and quality. In contrast, followers identify the next three most important barriers as an unclear digital strategy, lack of quality culture, and outdated systems. These differences in appraisal suggest that technology and data-related challenges become more visible to companies as they move forward with implementation.

SPOTLIGHT ON PEOPLE AND SKILLS

"Companies that are winning are investing in people first," observed one expert. The survey responses fully support the idea that successful Quality 4.0 implementation depends on empowering people in the right roles and developing the right skills.

Not surprisingly, the analysis shows that leaders of the quality management function are crucial to enabling the success of Quality 4.0, both today and in five years. Participants see high value in data scientists, although the survey found that these specialists are part of the quality management function in only 19% of companies today. Frontrunners assign higher value to data scientists than followers do, probably because they are more aware of the digital capability challenges they face. Quality inspectors and testers are the roles most likely to become less important in the next five years, participants say—an opinion that reflects companies' expectation that their reliance on analytics and automation will soon increase.

Participants also consider skills related to analytics and AI to be important—and as needing the greatest improvement in proficiency. One expert characterized the gap this way: "The data is there, but the people who analyze the data are not."

If Quality 4.0 becomes a competitive advantage that drives business value, quality careers will become more attractive. Quality specialists will then benefit from additional resources, cross-functional responsibilities, and more competitive wages.

THE WINNING MOVES

To effectively implement Quality 4.0—the technological as well as the nontechnological aspects—companies should take a structured approach that includes the following elements:

Prioritize pain points. Identify quality-related pain points in operations that the company can address by applying digital solutions. Determine which pain points to address first, based on potential to unlock value and reduce risk.

Identify, test, and scale up use cases. Identify use cases to resolve the prioritized pain points. Begin implementation with proof-of-concept (PoC) pilots that focus on high-value use cases. In each pilot, a multidisciplinary team should use agile development methods to quickly develop a minimum viable solution and to improve it through rapid iterations.

Develop a vision and roadmap. In defining the vision and roadmap, articulate how Quality 4.0 promotes the company's overall business strategy and how it contributes to creating a sustainable competitive advantage. Ensure that quality is a priority on the leadership agenda and a major component of the business strategy.

Establish technology and data enablers. Ensure that the technology and data enablers of Quality 4.0, including the IoT infrastructure and data architecture, are put in place. Identify and address deficiencies in the company's data, and anticipate how data issues could impede the scaling up of use cases.

Build the required skills. Determine the skills and scale of resources needed to implement the digital use cases and to sustain them over time. Define a digital talent strategy that addresses how to close skill gaps.

Manage the changes. Craft a change story that builds momentum in all departments. Establish an activist program management office to manage and oversee the implementation of digital technologies and data architecture.

Foster a quality culture. Recognizing that technology alone will not achieve a breakthrough in quality performance, foster a culture in which all employees take ownership of quality. Everyone in the organisation, not only those in the quality function, should be accountable. Make the necessary changes to the context in which people work, addressing topics such as metrics and incentives, role mandates, and organisational structures.

Ultimately, Quality 4.0 is about much more than technology. It is a new way of managing quality in which digital tools enhance the organisation's ability to consistently give customers high-performing products. As our study demonstrates, Quality 4.0 in no way diminishes the role of people in assuring quality. Indeed, giving people the skills to apply digital tools and to tell data-driven stories will be an essential part of ensuring quality in the factory of the future. Across manufacturing industries, the companies that win in the 2020s will be those that use digital to redefine the meaning of quality excellence.

SHARE Q

How Has COVID-19 Impacted on Clinical Laboratories?

Tony Badrick
B. App Sc, BSc, BA, M Lit St (Math), MBA, PhD(QUT), PhD(UQ), FAIMS, FAACB, FACB, FAIM, Member Aust Maths Soc, FRCPA (Hon), FFSc(RCPA), GAICD.
CEO Royal College of Pathologists of Australasia Quality Assurance Programs RCPAQAP.

Tony was Associate Professor, Faculty of Health Sciences and Medicine at Bond University for 4 years before becoming the CEO of the RCPAQAP in 2015. Tony is also Adjunct Professor School of Pharmacy and Pharmacology, Griffith University; Honorary Associate Professor, National Centre for Epidemiology and Public Health ANU College of Health and Medicine and ANU College of Science; Honorary Associate Professor, Faculty of Medicine, Bond University, Gold Coast; and Visiting Fellow, Australian Institute for Health Innovation, Macquarie University. He was President of the Australasian Association of Clinical Biochemists (2003-2007) and Vice President of the Australian Institute of Medical Scientists (2011-2018). Tony is currently Chair of the Education and Laboratory Management Committee of the Asian Pacific Federation of Clinical Biochemistry, a member of two International Federation of Clinical Chemistry Working Groups (Value of Pathology, Traceability), member of the Joint Committee on Traceability in Laboratory Medicine, and currently the Chief Examiner of the Faculty of Science of the Royal College of Pathologists of Australasia. Tony has also had published over 180 Papers and one book chapter (2 editions) in health care management and chapters in Clinical Biochemistry texts.

The pandemic has changed peoples' view and understanding of how pathology testing can impact them and, as we continue to progress through the transition to endemic COVID-19, expectations continue to change. Accurate and timely COVID-19 results were critical to enable epidemiologists to identify infectious patients and track contacts during the initial phases of the pandemic. Initially, this required pathology laboratories to develop assays before commercial tests were available. Because of the nature of COVID-19, pathology services developed popup testing and drive through centres, and in some cases, going from house to house collecting samples. Testing numbers soared, from hundreds to tens of thousands per day and laboratories had to move to separate non-contact teams working shifts covering the 24hour/7 days. Lab testing can't be conducted working from home and collecting and processing infectious samples can be risky. Much of pathology testing is centralised to enable automation. This is possible because the samples can be separated from the patient (unlike in surgery, for example). But the requirement for rapid results has meant that testing needs to be conducted near to the patient. Many labs started testing in more remote sites necessitating the need for training and support in regional centres. There were reagent and swab supply issues, as well as significant training requirements needed to maintain the service. Like many areas of healthcare, the ongoing requirements have taken a toll on staff and resources as evidenced by the recent problems with long turnaround times.

Ghaferi *et al*. (1) described three waves of surgical innovation that improved patient safety. These waves apply to many areas of human endeavour including pathology. The first wave was technical advancement such as automation, new techniques, and focused training. The second wave involved standardisation with checklists, measuring and reporting compliance, and quality measurement and feedback. This phase is epitomised by the introduction of externally assessed ISO standards such as ISO 15189 in pathology (2,3) . Australian pathology laboratories are all accredited to ISO 15189 as well as several other standards. The third wave of Ghaferi *et al*. is to move to high reliability organisations where there is much greater attention to frontline practices and behaviours, tangible leadership support for responding to and learning from error and a cultural shift toward teamwork and coordinated care (4,5)

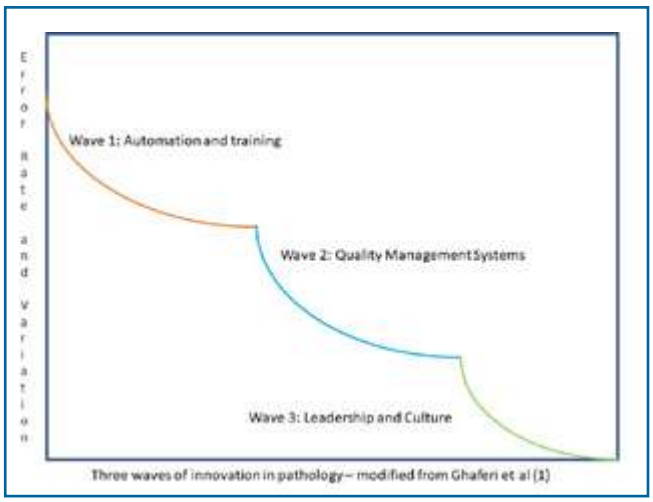
Applying this model to laboratory practice, the first wave was about automation, the second wave was about Quality systems and the third wave is about people. Moving to the third wave is a monumental leap for any organisation. Laboratories are complex organisations consisting of a factory component, high volume

testing, and a medical decision component sometimes requiring analysis of complex clinical and laboratory data and a clinical diagnosis.

All organisations prepare contingency plans based on perceived risk. Loss of power, IT, supplies, reputation or access to buildings, or impairment of key personnel, are all part of the risk matrix and strategies to mitigate against these are developed. Often the most important strategy is good communication and effective escalation. The pandemic has challenged many organisations as it has continued and had elements of nearly all the major threats. Shortage of reagents, staff loss, inability to recruit or train new staff, ever escalating workload, and scrutiny by customers have ravaged laboratories.

During the early phase of the pandemic, routine testing for non-COVID-19 illness dropped substantially. However, this returned within a few months leading to further strains on laboratory resources.

Pathology testing is part of the critical infrastructure of modern healthcare. The pandemic has highlighted the essential requirement to provide rapid and accurate testing to patients. This requires agile and innovative organisations to respond to threats like COVID-19. Agility has come from a strong quality management foundation with Australian laboratories being highly regulated and public and



Three waves of innovation in pathology – modified from Ghaferi et al (1)

private laboratories working closely together. There is a highly trained workforce, specialised by decades of centralisation and consolidation of public and private laboratory networks. Some of the first COVID-19 assays in the world were developed in Australian pathology laboratories.

What have we learnt from the last two years? People understand better the importance of pathology testing and they have witnessed how well it can work for them and the country, maintaining their safety. The community can see how rapidly testing can be deployed across the country for their convenience and safety. They have also seen how the system has a finite capacity. Point of Care testing for COVID-19 using Rapid Antigen Testing (RAT) is now part of common discussion (as at early January 2022) and indeed, many people will come to rely on these tests before going to work, on holiday, or to a restaurant. Many people will be exposed to this type of testing and understand better the impact it will have on the way they live. This is significant as this kind of testing will become more important in health and wellbeing into the future (6).

REFERENCES

1. Ghaferi AA, Myers CG, Sutcliffe KM, Pronovost P. The Next Wave of Hospital Innovation to Make Patients Safer. Harvard Bus Rev Digit Artic [Internet]. 2016;2–8. Available from: http://simsrad.net.ocs.mq.edu.au/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=118663636&site=ehost-live

2. Burnett D. ISO 15189:2003 - Quality Management, Evaluation and Continual Improvement. Clin Chem Lab Med. 2006;44(6):733–9.

3. Burnett D, Burnett L, Mackay M. Quality Management in the Medical Laboratory. In: Rifai N, Horvath A, Wittwer C, editors. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. St Louis: Elsevier; 2017. p. 61.

4. Hudson P. Applying the lessons of high risk industries to health care. Qual Saf Heal Care. 2003;12(SUPPL. 1):7–12.

5. Hopkins A. A practical guide to becoming a High Reliability Organisation [Internet]. Australian Institute of Health and Safety. 2021. p. 1–20. Available from: https://www.aihs.org.au/sites/default/files/A Practical Guide to becoming a High Reliability Organisation - Andrew Hopkins.pdf

6. Badrick T, St John A, Tirimacco R, Wanguhu K. Point-of-care testing—Has it come of age? Aust J Rural Health. 2021;

SHARE Q

AOQ J.M. Juran Medalists 2021

Jeff Ryall
Convenor, College of Juran Medalists

At two separate presentations in December 2021, two longstanding members of AOQ were awarded the prestigious Juran Medal and inducted into the College of Juran Medalists. The award recognises AOQ members who have contributed in an outstanding way to the application of effective quality management in Australia.

Every recipient of the JM Juran Award has typically created a Quality legacy in the lives of others over decades. The two latest are no exception. Their stories are different but there is a consistency between them: helping people to apply Quality effectively in their own context. That's a challenge we can all relate to!

MR RUSSELL VEITCH – SYDNEY CHAPTER

If you've been an AOQ Member for any length of time, you'll have experienced Russell's warmth and special passion for Quality. He currently serves AOQ in two ways: training and mentoring people embarking on their career in Quality, and as a writer for articles for Quality Business and its predecessor, Quality Australia. But he has a bigger story to tell.

From an original career in NSW Railways, where he introduced the disciplines of Quality some 40 years ago, there aren't many aspects of Quality that Russell hasn't touched. His ideas, grounded in the practical and effective application of Quality, were greatly informed by study tours to the USA and Japan, where he learned from some of the 'greats' in Quality thinking. Russell is also a Past National President of AOQ (2006-7).

Accepting his award in Sydney on 6 December 2021, Russell responded:

"To receive recognition from one's peers is about the greatest award one could receive. Like many quality professionals, we are just contributing to something we are passionate about, good people doing good things. Doing "Quality" is not hard, anyone can do it and it's happening all around us. To be associated with the great Joseph Juran and all of my friends and colleagues at the Australian Organisation for Quality has been a privilege and an honour."

DR JACQUELINE GRAHAM – MELBOURNE CHAPTER

Every career in Quality is different – Jackie's especially so!

Dr. Graham is a 'Quality Statistician,' a leader in the field of statistical process control and its application to quality improvement in businesses of all kinds. She possesses a rare blend of academic excellence and a practical knowledge of the 'real' world, an invaluable asset when helping people analyse data for business improvement. Starting in the UK auto industry in the early 1980s, there is hardly a sector somewhere in the world that Jackie has not assisted.

And another interesting part: for five years Dr. Graham worked as an aid to Dr. W. Edwards Deming. In this role she assisted with two- and four-day conferences as well as consulting at board level to major companies in the USA, Australia, Asia and the United Kingdom.

Every JM Juran recipient finds the experience meaningful. For Jackie, after accepting her award in Melbourne on 8 December 2021:

Receiving the Juran award was a great honour and I am humbled to be in the company of so many outstanding individuals. I am grateful to AOQ for the opportunity to be recognised by my peers. AOQ has nurtured excellence for over 50 years and was important in my development when I moved to Australia in 1989. The process of applying for the Juran award requires reflection on your career, allowing me to look back on my opportunities in the field of quality and business improvement. I have been fortunate to work and learn from so many outstanding people. I am only the third woman to receive this award, but I hope it will encourage other women in the field of quality and business improvement in future.

Dr Jackie Graham (third from left) was congratulated by previous JM Juran medallists (from left) Jeff Ryall (2007), Dr Helen Liddy (2011) and Professor John Dalrymple (2018)

You can see the full citation for both recipients at the AOQ website JM Juran Award Page (https://www.AOQ.net.au/awards/jm-juran-award/)

UPDATE Q

AOQ President's Message

Pictured – AOQ Board Directors, Maree Stuart (President), Dr Martin Andrew (Company Secretary), Nicole Boddington, Ravi Fernando, David Harrison,Richard Jenkins Jim Kefaloukos, Catherine Blake (Treasurer) Sonja McFarlane, Jeff Ryall JM

APQO/ QUALCON® 2021 CONFERENCE

This special edition of Quality Business is a celebration of APQO/Qualcon® 2021. It brings the highlights of the conference together in a carefully curated showcase. The conference organising committee achieved a terrific outcome for AOQ and APQO. With nearly 60 presentations from a marvellously diverse group of both keynote and stream presenters from over 13 countries, it was a truly international conference and offered fantastic, thought-provoking material. The conference also put AOQ on a firm financial footing so that we can pursue initiatives to deliver more member value and continue to raise the profile of our organisation within the Australian and international community.

NEW YEAR, NEW AOQ BOARD

Following the AGM in November, a new Board was installed. The terms of Jackie Stone (President) and Richard Jenkins (Treasurer) ended, and we thank them for their wonderful and tireless efforts over the past few years in steering the ship through very difficult, unprecedented (remember that word?) times. Jeff Ryall's term as an elected member also came to an end and David Harrison came onto the Board as a new elected member. In November, the Board appointed Catherine Blake as Treasurer and in February, the Board appointed Jeff Ryall to the Board as the representative of the College of Juran Medallists and for his abilities to pursue some key AOQ projects.

NEW CHAPTER LEADS IN BRISBANE AND PERTH

Our volunteers are exceptionally important to our success. Volunteers such as Suresh Prabhakaran and Tara Bannister both provided enthusiastic leadership to our Perth and Brisbane Chapters respectively and have stepped down from their roles as Chapter Leads. We thank them for their efforts in growing the Chapters and facilitating engaging events at both a local and national level.

Our new Chapter Leads in Brisbane, Perth and Adelaide are Helena Juppenlatz, Brenda Moore and Snehal Patil. AOQ members might have already seen the contributions of Helena and Brenda in previous editions of *Quality Business.*

Helena is the Risk, Ethics & Compliance Officer at a global engineering firm, WSP. She has over 20 years of experience in Quality, Risk and Governance across various industries. Helena has Masters of Science and is currently finishing her Masters of Applied Law at QUT. Helena has been an active member of AOQ since 2019 and is AOQ's delegate to the Standards Australia Technical Committee for Organisational Governance (QR-17). She also coordinates the Q&A column in Quality Business. In her role as the Brisbane Chapter Lead, Helena is looking forward to working with the Brisbane Chapter Committee to bring people of similar interests in Quality together and assist them in sharing knowledge and achieving their professional goals.

Brenda is a Perth-based consultant. She specialises in process improvement, project management and program development for the health, community services and Not for Profit sectors. She has worked on quality and process improvement projects for the last 12 years after spending the early part of her career in healthcare operations management. Since she joined AOQ, Brenda has also helped with aspects of the APQO Qualcon 2021 program and she coordinates the book reviews in Quality Business. Brenda is looking forward to coordinating fun and interesting events, for our Perth Chapter.

Snehal Patil has just been appointed to the role of Adelaide Chapter Lead. We will feature a little about Snehal in our next edition of Quality Business.

Of course, the Chapter Leads are members of a team of other enthusiastic AOQ members who make up the Chapter Committees. If you would like to become involved in your local Chapter Committee, please feel free to get in contact with us. We shall welcome your involvement.

We need your help!

As we peek into the year ahead of 2022 and all the potential it holds, I'd like to ask our AOQ members and readers of Quality Business for some help over the coming months. Quality is in large part a function of customer value. It's for that reason, I'd like you to reach out to me at president@aoq.net.au to let your Board know the potential you see for yourself, the Quality movement and AOQ in 2022. What do you see on the horizon? What can AOQ do to help you realise your potential? What can we do together to elevate the Quality movement so that we realise our Mission to make Quality meaningful, compelling and satisfying?

"Your role as a leader is to bring out the best in others, even when they know more than you." Dr Wanda Wallace, The Inspirational Leader.

Finally, thank you to my fellow Board members for their trust and support in firstly electing me as President and for their ongoing work in realising the Purpose of AOQ of providing leadership in quality that drives a strong, competitive Australia. As a "hands-on" leadership team, we all help to shape AOQ into the resilient, vibrant organisation that it has and will continue to become. AOQ is more than 60 years old and we stand on the shoulders of the giants who have gone before us.

Regards
Maree Stuart, President, AOQ Ltd

NZOQ

Board update

For over 45 years the New Zealand Organisation for Quality (NZOQ) has been the professional organisation for quality practice and quality practitioners in New Zealand. Following a quality conference of academia and industry at Massey University, New Zealand, in 1976 NZOQ was finally formally established as representative quality society in January 1978 to cover a very wide range of industries and occupations across New Zealand.

Its membership base ensures credibility and professionalism, its training programmes assist in skills growth and productivity and finally it represents and promotes New Zealand to the "quality" world. We have long-term positive relationships with many other key national quality organisations across the globe.

With its Learn-Share-Grow strapline it has delivered quality learning, it has shared with a membership of supportive individuals and corporates and it has grown the stature of New Zealand in the international quality arena.

NZOQ welcome all readers to this special issue of Quality Business which celebrates "The Future of Quality is Now" the AOQ hosted international 26th Asia-Pacific Quality Organisation (APQO) Conference incorporating Qualcon 2021 digital event. This issue features a range of excellent, relevant and topical articles presented at that conference. This special bumper issue is an essential document and should be on your quality bookshelf for recurring future reference.

NZOQ is a charter member of APQO, the major international quality organisation for the Asia-Pacific region. In the first years a NZOQ member, Mark Dykes, was the second and third APQO President (1992-1996). Our current President, Abraham Fenn, was APQO President in 2018 continues to be a APQO core council member.

NZOQ is also a Partner organisation to the Asian Network for Quality (ANQ) which is a major Asian international quality organisation. NZOQ is the sole "western" quality organisation affiliated to ANQ.

NZOQ is proud to have created Quality Business in 2015 to bring a fresh new professional image to our membership journal. It has been very successful and in 2017 AOQ became a publication partner in bringing Quality Business to a wider audience and readership.

In 2021 NZOQ became a host website for Dr. Henry Neave's 12 Days to Deming learning programme. This has proved to be very popular across the globe by both introducing Deming to a new audience and also allowing established quality practitioners to refresh their knowledge.

Regards
Dan Forsman

Pictured – NZOQ Board Directors, Abraham Fenn (President & Chair), Tony Rew (Vice-President), Dan Forsman (Secretary & Treasurer), Ranjeeta Singh, Nicky Campbell-Allen

Asian Network for Quality

Helping markets work better

jas-anz.org