SAQI
The South African Quality Institute

e - Quality Edge
bringing quality information to South Africans since 1996

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CONTENTS

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The Future of Quality

I don't know how many of our readers subscribe to the Linked In social (Business) media network but I have found this medium to be a very interesting platform to share and receive conflicting views on Quality. One such view related to age discrimination in the Quality Profession.

"Should older experienced Quality Professionals be discarded for newer models?" received dozens of comments most of which implied that the "youth" would not be able to handle the challenge. Another discussion related to *"ISO 9001 not being robust enough for continuous improvement and customer satisfaction and can it be substituted for the automotive TS 16949 improved version, even if you are outside of the automotive sector?* What intrigues me is the very diverse comments and level of understanding coming from the commentators. What is definitely consistent is that the majority of comments come from the more mature section of society. Now this could be that all these people are semi-retired and have nothing else to do with their time or the profession is not attracting younger participants. As Quality professionals we need to be bringing the next generation on board so we can ensure that Quality has a long and lasting future.

We encourage all our readers to join the SAQI group on Linked in to share your views or post your topic for discussion.

Paul Harding SAQI MD

WWW.SAQI.CO.ZA

Quality:
helping South Africans live, learn and work better

PROUDLY SOUTH AFRICAN

IS ISO 9001:2008
GOOD ENOUGH FOR YOU?

by Paul Harding SAQI MD

Is ISO 9001:2008 comprehensive enough to deliver our desired business results and satisfy our customers?

Today around one and a half million organizations in 178 countries around the world have developed and implemented a standardised Quality Management System (QMS) to suit the ISO9001:2008 Quality management systems - Requirements Standard. Yet many of these organizations have failed to recognize how much value the standard can give to their organization.

Linked In debate

There has been an interesting thread that has appeared in the Quality Management Professionals group of the Linked **In** business network recently under the title of *"Using ISO/TS 16949 in a non automotive industry"*.

The original comment was as follows:

"I recently acquired a copy of ISO/TS16949 and although my organization is non automotive, I really like the principles of having what is essentially an ISO9001 + standard for best practice and prevention. Does anyone else here use this within a non automotive manufacturing environment? I have already started to create control plans that will supplement our product Quality Plans."

Now to put our non automotive readers in the picture TS (stands for Technical Specification) 16949 was produced by the International Automotive Task Force (IATF) from a myriad of previous standards that were being used by various automotive manufacturers around the world to bring their suppliers up to a required standard for quality. It was felt at the time, and still is, that ISO 9001 in itself would not be sufficient for the automotive industry's very special requirement. The question that we need to ask is "How special is the automotive sector requirement?

*One recent follow up comment on this **Linked In** thread says that "ISO 9001:2008 provides the minimum requirements for developing and implementing a Quality Management System (QMS). In the past, most of my clients wanted the certificate (registration) and comply with the bare minimum. However some clients wanted a great QMS and for these clients we would integrate the QMS with the organization's Management System and include various requirements from other standards along with tools and techniques not typically used in their sector. The certification remained ISO 9001:2008 however the QMS was well beyond its requirements."*

This comment is now implying that ISO 9001:2008 has requirements that are limited.

Is ISO 9001:2008 Ring fenced?

Now this interpretation of the ISO 9001:2008 Requirements clearly sets a "ring fence" around what an organization should or should not do in order to comply. But where in the standard can we find these minimum requirements? The main purpose of the standard is clearly stated as *"to use a process approach to improve the effectiveness of a QMS to enhance customer satisfaction by meeting customer requirements."* Ref. 1

If we refer back to the original linked in comment the author mentioned a "Control Plan." Now this is a specific document used in the automotive sector to describe the systems and processes required for controlling product. Ref 2. However, this is what all organizations should be doing anyway. There is no reference in the ISO 9001:2008 standard to developing a **minimum** process that **barely** improves the effectiveness of the organization's system, or only **partly** enhances customer satisfaction or **marginally** meets customer requirements. What the QMS requires as per the ISO 9001:2008 standard is entirely dependant on the product or service that the organization is providing and its ability to meet the expectations of the customer by describing systems and processes for controlling product taking into account the magnitude and complexity of the organization delivering the product.

What are the requirements for Quality System Standard documentation and tools and techniques?

If we accept that standardisation is important to achieve quality and productivity objectives, then we must establish how much of the whole system and to what extent the system needs to be documented. We then need to ask what type of documents we need in place to satisfy our customer requirements. Also we must ask ourselves what tools and techniques do we need to use in order to satisfy our customer? The ISO 9001 standard already asked us to determine applicable methods including statistical techniques but how many organizations use these techniques? To what extent must we plan to meet our customer requirements? One of the functions of a Quality Assurance department in a large organization is to ensure that the organisation adheres to a formal documented quality system, as prescribed in the ISO 9001: 20008 Quality Standard. However, if we study the PDCA based model as we see it in ISO 9001:2008 we see a broader integrated system that should ensure that each other functional area meets its goals and quality targets as laid down in the organization's improvement plan to satisfy customer needs and address customer concerns. Yes! ISO 9001:2008 does require continuous improvement. How many of the one and a half million certified organizations have

an effective improvement plan? This of course will create a need to balance the ongoing use of standardization that is stifling change through bureaucracy that does not add value and start adopting new standardized methods that do add value. What TS 16949 does is lay down these requirements as mandatory that some people see in ISO 9001 as optional.

What are minimum requirements?

This perceived situation of ISO 9001 being only a Minimum requirement standard should have been rectified with the introduction of the ISO 9001:2000 Standard that requires that ongoing improvement be in place. This revised version of ISO 9001 incorporated the application of the Shewhart PDCA cycle and was an attempt to align the Standard to suit market and sector requirements and focuses on the continual improvement of the Quality management system to improve Customer Satisfaction. The 2000 edition also tried to move away from the very specific manufacturing requirements that were apparent in the 1994 version in order for service organizations to be included. Nothing was intended to be minimized but just written in such a way that encouraged flexibility depending on the size of the organization or the complexity of the product or service. So in fact there should be no need for a separate sector specific standard as this is actually an admission that the development of a formal Quality Management System to ISO 9001 has failed to be interpreted and applied correctly to suit sector requirements. But who has failed to interpret the standard correctly? We can't blame the automotive Original Equipment Manufacturers (OEMs) for wanting high quality consistent product from their first and second tier suppliers.

Conclusion

We need an integrated quality management systems approach to improve quality, productivity, profit and customer satisfaction. The basis for enabling the system appears to be twofold. Firstly it relies on a standardised approach and a standard has been developed in theory through ISO 9001:2008 that should cover all requirements to enhance customer satisfaction through a systems approach. Secondly because the requirements standard cannot be totally prescriptive in its tools, methods and application criteria and still satisfy each sector or organization it relies very much on the competence, knowledge, skills and experience of the certification bodies and their auditors to ensure satisfactory implementation.

References:
ISO 9001:2008 ISO Geneva Switzerland
ISO/TS 16949:2009 ISO Geneva Switzerland
IATF

From Dark Ages to Enlightened Reporting

Article issued by CGF Research Institute

Modern day company reporting finds its roots as far back as 7500 BC, which is when we believe the first rudimentary form of accounting records and tokens may have been used to track certain business activities. Of course, there are more accurate details of record keeping from 1000 AD onwards, when Italian merchants used more sophisticated forms of bookkeeping in response to their trade growth. The double entry bookkeeping system found its way between the 1500 - 1700 era, as charted companies required improved records and systems when colonialism expanded. But it wasn't until the 1930's when the US authorities started regulating accounting practices in response to the stock market crash and widespread fraud, that a true business reporting framework became evident. It was only in the 1970's when the concept of *Corporate Social Reporting (CSR)* was born, where companies were becoming more pressurised to consider their 'dues' to other stakeholders.

For centuries behind us, the privileged few who commanded empires and businesses, had the power to control information regarding their wealth and activities. Consequently, they were able to prevent ordinary class citizens from participating in an economy in any meaningful, dare we say 'fair' way. Fortunately times have changed this prehistoric and repugnant behaviour, which in almost all cases left people and the environment massively deprived -- even damaged -- through the greed of a few.

And so we have finally realised the critical importance and power of citizens acting in unison with all the role players as it relates to the supply chain of business, locally and internationally. Through their collective performance, and the transparent relationships based on mutual trust, one is hopeful that the future of a company's business and its strategy will greatly underpin, and preserve, long term value for all its stakeholders and ultimately the country at large. This can only be achieved where companies fully subscribe to integrated reporting, which is -- according to the King III Code on Corporate Governance -- defined as *"a holistic and integrated representation of the company's performance in terms of both its finance and stability."* Unlike years gone by, stakeholders are increasingly requiring in-depth information on companies in order to make informed decisions on the company's true value, performance and sustainability, as they decide whether or not to support it.

Indeed, without the support of the company's stakeholders -- unlike their predecessors of earlier times -- a company is doomed to certain failure. To maintain the support of its stakeholders, companies will be required to provide them meaningful information that covers all aspects of the company's performance and position. This information must be underpinned by reporting principles that provides assurance and honest representation where there is substance over form. With a heightened awareness of fairness and transparency; for those companies who intend to outperform their competitors - they will need to prove their worthiness of support by their stakeholders through their ability to create and sustain value at all levels. Such sustainable value must cover the financial, societal and environmental aspects, as well as the impacts the company has upon these areas, albeit positive or negative.

There is much hope still to come, considering where we started as peasants of the land, owned by the few elite some time back. Through the work of the International Integrated Reporting Council (IIRC) -- established in 2010 under the guidance of the Global Reporting Initiative (GRI), international regulators, investors and businesses amongst other -- stakeholders will truly be wiser and better off as they see the overall picture of a company.

Moving forward, stakeholders will have the ability to decide both for financial and or ethical reasons, whether a company is deserving of their support, and whether it should be allowed to continue its operations should such operations be offensive or damaging to the environment. According to the IIRC, integrated reporting will bring together the material information about the company's strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates. Such transparency, which previously was amiss, will provide a clear and concise representation of how a company demonstrates stewardship and how it creates value, now and in the future.

South Africa is one of the first countries worldwide to actively encourage integrated reporting as a recommended business practice and this is articulated in King III. However through the Listing Requirements, it is now mandatory for all JSE listed companies. Long may integrated reporting live!

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IS CHERNOBYL DEAD?

Extracts from a new book by South African researcher Chris M Meyer

Current situation

Today, the Pressurised Water Reactor (PWR) is practically the industry standard for nuclear power plants worldwide. All nuclear-powered submarines and surface ships use this type of reactor, and most 'new' (that is, installed since the early 1960s and still operating) large nuclear power stations are powered by nuclear reactors that are cooled and moderated by water (i.e. PWR reactors and Boiling Water Reactors (BWRs, used in Fukushima)). Why should this be so? The answer is, largely through the vision, competence and enormous influence of one man, Admiral Hyman Rickover of the United States Navy. Rickover, who died in 1986 after 63 years of active duty, was largely responsible for the world's first nuclear-powered submarine, the Nautilus – launched in 1955 – and the world's first civilian nuclear power plant, Shippingport – which went online in 1957. He not only laid the foundations for the US's nuclear navy (more than 107 nuclear-powered submarines and 6 surface warships), but also ensured that the Pressurised Water Reactor, developed from nuclear submarines,

became the basis of modern nuclear power plants. It was largely through his unique leadership and **strict quality management** that this became possible.

"Is Chernobyl dead? – essay on energy: renewable and nuclear", helps us understand how the PWR developed the way it has in the USA, why the UK was unable to access this technology and was forced to develop gas-cooled reactors, why the "results first, safety last" approach of the former USSR lead to Chernobyl, and why China followed a different path in developing its nuclear technology. At a time when the government is planning huge investments in nuclear and renewable energy, and many will be considering careers in these fields, the contents of this book can help, by showing how we can find our energy future in the past

Why bother reading a book saying that we need to go back to the future, if we want to find where nuclear power and renewable energy will be going? This simply doesn't make sense: surely technology is advancing, and becoming more complex, and not

going backwards? A mere glance at several questions facing us seems to indicate this. For example: are we starting to run out of oil? Is mass transport possible without it? Should we switch to electric vehicles? What about bio fuels? Is wind energy the answer? And, of course, is another Chernobyl just a matter of time if we build more nuclear power plants (especially in the light of Fukushima)? What about nuclear waste? And, if more countries do embrace nuclear power, where is all the uranium fuel going to come from to power them? What will the future bring, especially "in the light of blackouts"? What energy sources will be left for our grandchildren, and their grandchildren?

The past situation

Strangely enough, many of these questions are anything but new. A Frenchman called Mouchot pioneered many discoveries in solar power after 1860: because France was then experiencing coal shortages. He even experimented with storing solar energy as hydrogen: but stopped all this in 1880, when cheap coal supplies became available. Paul la Cour, who pioneered wind turbines in Denmark, used hydrogen to store wind energy: in 1897.

General Motors was preparing for oil supplies to run out in the 1920s, and seriously planning to shift to alcohol produced from cellulose as a fuel - until the discovery of cheap oil and tetraethyl ethyl lead in 1923-1924. Even the electric car is nothing new. In fact, there were more electric cars than petrol-driven ones until the invention of the self-starter in 1912. Mass transport using rechargeable electric batteries is also hardly new, as the world's first electric cab service was introduced in London in 1896. Strangely enough, a shortage of uranium to fuel nuclear reactors was planned for when the very first nuclear power was generated. In fact, very few people know that the first civilian nuclear power plant also conducted a successful but now forgotten experiment on how to "breed" nuclear fuel. We will need to go back to the future. That is, we need to go back in time to find the future of energy, because, as this book shows, many of the concepts we will need for the challenges of tomorrow are actually not new. In fact, some of them, like solar architecture, using the heat of the sun, are actually very old indeed, thousands of years old.

Put another way, even a brief look at history shows that, quite literally, there is nothing new under the sun. Many seemingly modern ideas in energy have actually been developed and then discarded many times, over and over again. When there is a shortage of fossil fuels, alternatives – be they nuclear power, wind energy or harnessing the sun's heat – are

developed. Then, when the oil price drops, or a new source of cheap coal is found or large deposits of natural gas are found, the promising technology is suddenly dropped. The wind turbine industry we see today was very nearly obliterated by prosperity, and can be traced to the energy shortages experienced in Denmark during World War 1 and World War 2.

The energy crisis is not new

The use of solar power in the USA only really began after massive oil price increases in 1973: and nearly collapsed when oil prices fell in the late 1980s. And promising research into recycling nuclear fuel – work that proved that nuclear waste could be reused as fuel – was stopped in the USA in 1994, because the price of oil was then less than $10 per barrel. Now, more people are remembering that enough uranium has already been mined and stored as waste to provide all the electrical power of the USA for 500 years if this technology could be perfected and applied. And, nuclear waste would then not need to be stored for ca 10 000 years in expensive national storage facilities: each power plant would only need to store its own waste for ca 300 years.

In other words, energy crises are not new. The sustainable use of practically all forms of energy is regularly rediscovered when the fuel price suddenly increases. The model for energy crises appears to resemble boom-bust cycles that, as John Perlin has shown, can be traced right back to Ancient Greece, and the Roman Empire.

And, as anyone reading this book will find our future technologies for energy are just waiting to be rediscovered, updated and reapplied – for those that bother to find out they are there. The way to the future is waiting to be followed – even if it at first appears to first go back in time.

For more details on the book, please access the following link :
http://www.eepublishers.co.za/images/upload/Is%20 Chernobyl%20Dead%20-%20Summary.pdf)
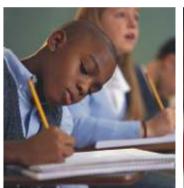
Quality of Education;
What has Changed in 49 Years?

Speech from the President's message on education to Congress
January 29, 1963 by JOHN F. KENNEDY

Education is the keystone in the area of freedom and progress. Nothing has contributed more to the enlargement of this nation's strength and opportunities than our traditional system of free, universal elementary and secondary education, coupled with widespread availability of college education.

For the individual, the doors to the schoolhouse, to the library and to the college lead to the richest treasures of our open society: to the power of knowledge – to the training and skills necessary for productive employment – to the wisdom, the ideals, and the culture which enrich life – and to the creative, self-disciplined understanding of society needed for good citizenship in today's changing and challenging world.

For the nation, increasing the **quality** and availability of education is vital to both our national security and our domestic well-being. A free Nation can rise no higher than the **standard of excellence** set in its schools and colleges.

Ignorance and illiteracy, unskilled workers and school dropouts – these and other failures of our educational system breed failures in our social and economic system: delinquency, unemployment, chronic dependence, a waste of human resources, a loss of productive power and purchasing power and an increase in tax-supported benefits.

The loss of only one year's income due to unemployment is more than the total cost of twelve years of education through high school. Failure to improve educational performance is thus not only poor social policy, it is poor economics.

At the turn of the century, only 10 percent of our adults had a high school or college education. Today such an education has become a requirement for an increasing number of jobs. Yet nearly 40% of our youth are dropping out before graduating from high school; only 43% of our adults have completed high school; only 8% of our adults have completed college; and only 16% of our young people are presently completing college.

As my Science Advisory Committee has reported, one of our most serious manpower shortages is the lack of PhD's in engineering, science and mathematics; only about one-half of 1% of our school age generation is achieving PhD degrees in all fields.

This nation is committed to greater investment in economic growth; and recent research has shown that one of the most beneficial of all such investments is education, accounting for some 40% of the nation's growth and productivity in recent years. It is an investment which yields a substantial return in the higher wages and purchasing power of trained workers, in the new products and techniques which come from skilled minds and in the constant expansion of this nation's storehouse of useful knowledge.

In the new age of science and space, improved education is essential to give new meaning to our national purpose and power. In the last 20 years, mankind has acquired more scientific information than in all of previous history.

Ninety percent of all the scientists that ever lived are alive and working today. Vast stretches of the unknown are being explored every day for military, medical, commercial and other reasons.

And finally, the twisting course of the cold war requires a citizenry that understands our principles and problems. It requires skilled manpower and brainpower to match the power of totalitarian discipline. It requires a scientific effort which demonstrates the superiority of freedom. And it requires an electorate in every state with sufficiently broad horizons and sufficient maturity of judgment to guide this nation safely through whatever lies ahead.

As most of our readers are parents themselves, we have asked SAQI's education editor Richard Hayward (rpdhayward@yahoo.com), a retired headmaster and published author to give us some words of wisdom on how to get quality principles instilled in young people.

Sleep more to achieve more

'Time for bed,' is a parental instruction that can cause tensions. The child wants to watch just one more TV programme or play a last computer game. Yet it's essential that a child has enough daily sleep. Sufficient sleep impacts hugely on a child's achievements.

Scottish research cited by Hannah Frankel in Times Educational Supplement has proven that, 'a good night's sleep is fundamental to everything from academic ability and behaviour to memory, concentration, sporting prowess, decision-making, creativity and mental health."

How much sleep is enough? Guidelines for pre-schoolers through to Grade 12 are:

Age	Amount of Sleep
3 to 5 years	11 - 13 hours
5 to 12 years	9 to 11 hours
Teenagers	8 to 10 hours

A sleep-deprived child is likely to become restless, hyperactive and irritable.

The pace of school life and the demands made on children are often more than when their parents were at school. Many schools have extramural programmes that extend into the late afternoon and early evening. Homework and project work make huge inroads into children's free time. The work covered in a subject today is enormous. If you're not convinced, compare what is taught in the 2012 Maths or Science class as to when you were at school!

When the pace is hectic, it's harder to 'switch off' and quieten the mind for sleep. Even when a child goes to the bedroom, it doesn't guarantee a quiet restful place. If there's a computer or TV in the room, the youngster could spend hours watching the screen. Ideally, the room should be in a quiet part of the home away from computers and TV sets.

Sound sleep habits can be learnt. Get into a routine. In the hour before bedtime avoid school work, computer games and watching TV. Give caffeine and fizzy drinks a miss. Switch on the radio, listen to music or read a book. Have a set time for bedtime.   The routine can become a pleasant one.

Positive results of sticking to a set routine will soon follow. The child gets up the next morning feeling refreshed and enthusiastic (well, on most days!) about what awaits at school. The classroom and extramural efforts made by the child will be of quality ... and the actual achievements of great quality too!

Richard Hayward does Total Quality Education programmes under the aegis of SAQI. For more details, kindly contact Vanessa du Toit (012-349-5006; vanessa@saqi.co.za) or him (011-888-3262; rpdhayward@yahoo.com)

SAQI Training Programme for 2012

All courses offered by the South African Quality Institute are presented in association with other course providers and are available to all organisations including SMMEs and corporates. SAQI can assist with the training of a company's workforce and all training packages can be run in-house at cheaper rates. A special 10% discount applies to SAQI members. **All prices include VAT**. For more information or to register contact Vanessa du Toit at (012) 349 5006 or **vanessa@saqi.co.za**

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B12	ISO 14000 overview	1	R2,150.00			26		
B14	Integrated Management Requirements	3	R4,250.00				2-4	
B16	Internal Quality Auditing	3	R4,400.00	8-10			29-31	
B20	Organisational QMS Lead Auditor	5	R9,980.00				21-25	
B24	How to write procedures	2	R3,740.00	15-16			17-18	
B34	Statistical Process Control	5	R9,980.00		12-16			25-29
B38	Development of QMS	5	R9.980.00		5-9			18-22
B41	Introduction to Quality Control	1	R2,150.00		1			
B48	ISO 9001 Requirements Workshop	3	R4,250.00	27-29				5-7
B49	SHEQ Internal Auditing	3	R4,250.00					25-27
B58	Customer Satisfaction and Excellence	2	R3,740.00	13-14			15-16	
B64	Introduction to Quality Techniques	3	R4,250.00			3-5		
B65	SAQI Certificate in Quality	10	R18,320.00				7-11	11-15
B66	Problem Solving and Decision Making	3	R5,200.00					5-7

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- Customer Care (B39)
- Customer Satisfaction and Excellence (B58)
- Development of Quality Management System (B38)
- EMS Lead Auditor (B50)
- Executive Report Writing (B57)
- Exceptional Service (B32)
- Health And Safety Lead Auditor (B52)
- How To Write Procedures, Work Instructions and ISO 9000 Overview (B24)
- ISO 14000 Overview (B12)

- ISO 9001:2008 Requirements Workshop (B48)
- Integrated Management Requirements (B14)
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- Introduction To Quality Control (B41)
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...back to contents page