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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Welcome to the February Newsletter

In this month's edition we give our readers some food for thought on my personal interpretation of the requirement for management review found in the 2015 updated version of the ISO 9001 quality management systems - requirements standard.

Terry Deacon of SAQI partner Project Pro writes about the removal of the Critical Chain from the 6th edition of Project Management Body of Knowledge (PMBOK).

Following the successful plant visit by SAQI members to the Nuclear Energy Corporation of South Africa late last year we profile their training centre. Our regular contributor Terry Booysen informs us about holding directors personally liable and asks where to draw the line? Richard Hayward encourages our learners to be more involved.

SAQI is still trying to ensure the South African Organizing Framework for Occupations (OFO codes) are brought into line with actual titles used in the Quality profession. We have recommended adding the title of Quality Manager under the code 132107. These recommendations have been accepted by the SSETA and will now go for final approval. Quality Control Manager, Quality Assurance Manager and Supplier Quality Assurance Manager will also be recommended as alternative titles. We are also trying to get the title Quality Technician approved as an OFO code in line with the current training curriculum sitting at the QCTO. This process has been ongoing for more than five years and we hope to see a conclusion soon. We would like to thank our fellow organization SASQ for their support in this process.

Paul Harding

SAQI MD

Is your Management Review effective?

By Paul Harding MD SAQI

There was a major change to the ISO 9001:2015 Quality management systems – Requirements standard that fell under clause 9.3.1. The standard now requires that top management reviews its Quality Management System (QMS) to ensure it is aligned with the strategic direction of the organization. By implication this means that senior executives involved in developing strategy should show leadership qualities by being part of the management review activity. In the past many executives have seen management review as a separate activity for the quality department and have not necessarily given it full support.

Planned intervals

The frequency of management reviews according to the requirement standard has long been a contentious issue. The standard says management *shall review its QMS at planned intervals*. This leaves the clause open to abuse. A planned interval can be once a month, once every six months, once a year or once every two years or any other planned interval the organisation chooses. If the choice is once a month we are downgrading the review to become a typical Quality Control meeting were we will probably focus on daily performance issues rather than look at the bigger picture of the function and effectiveness of the QMS. If we only have a management review once a year it may be too late to pick up poor performance, changing trends or imminent customer migration. The frequency of review is also affected by the maturity of the QMS. If it has been recently introduced and has not yet become mature then more frequent reviews may be necessary. I have always recommended four reviews a year for the first two years of QMS development and then once the QMS has become entrenched (as it should) then two reviews a year should be adequate. Has the new revision had an impact on frequency of the reviews? With the increased emphasis on leadership being accountable for the QMS I would think that the management review would be an ideal platform to demonstrate this accountability as well as checking alignment with strategy and the performance of the QMS in line with organisational strategic objectives. Also there may be new risks identified and activities and responsibilities put in place to satisfy the changed requirements found in the new standard that may need executive input.

Management review inputs

Most of the inputs into management review are carry overs from the previous 2008 standard but there are some subtle changes. The standard says we now need to look at changes to external and internal issues that are relevant to the QMS. There was a lot of debate at the TC 176 meetings about the use of the word *issue*. The word generally is associated with a negative concern. My colleague David Hoyle prefers the more neutral word factor which I totally agree with. A note has been added to the standard, however, to indicate that issues may be positive or negative. External issues or factors amongst others may be a change in customer expectations, increased competition and new products coming to market or even a change in statutory or regulatory requirements. Internal issues may be system, process, product or people related.

The previous management review requirement on process performance and product conformity has now been expanded to; *information on the performance and effectiveness of the QMS*. Whilst this element still includes process performance and conformity of products and services the emphasis now lies with the QMS as a whole. Information is also required covering customer satisfaction and feedback from relevant interested parties. The standard still does not specifically use the word "measure" when it comes to customer satisfaction. There is still a school of thought, although a little outdated, that measurement is exclusively used for something tangible like a weight or a temperature and feedback from a survey is seen as only a perception and therefore can only be monitored. The automotive industry takes the measurement of customer feedback results in terms of product and service satisfaction indices very seriously and uses the extensive information collected to modify processes and its products to improve its market share. Part of the input into management review now includes the extent to which quality objectives have been met and will be one of the main measures on the effectiveness of the QMS. This was a requirement in the automotive standard TS 16949 and is a welcome addition to the new ISO 9001:2015 standard. Another new addition is information on the performance and effectiveness of external providers. If we look at some of the major quality failures in recent times, whether the NASA Challenger space shuttle, the BP oil rig disaster or the various automotive recall campaigns there was primarily an external provider involved in the failure.

Adequacy of resources is another inclusion as a management review input. This makes sense as the approval of capex or headcount approval is usually a function of executive management. The executive must also now make judgements on how these resources impact on the performance of the QMS. The addition in the 2015 standard of the need to address risks and opportunities has also impacted on management review. Management must now take into consideration the effectiveness of actions taken to address these factors.

Another debatable point is the inclusion of opportunities for improvement as an **input** into management review. Previously this was considered only as an **output** from management review. What this may be telling us is that opportunities for

...continue on page 3

Is your Management Review effective?...continued

improvement to the system may have to wait six months or a year before they may be considered? Surely if an opportunity for improvement is recognised prior to the management review meeting this can be discussed outside of the meeting. I would imagine that the previous standard recognised that senior management could identify a previously unidentified opportunity, given their access to resources, based on the general information they were given after analysing the data.

Management review outputs

As mentioned above, decisions and actions related to opportunities for improvement are still retained as an output from management review. We must assume that a decision and actions related this input opportunity will be over and above other decisions taken at the meeting on other new opportunities for improvement identified during the review process. Another subtle change is that the 2008 version called for decisions and actions related to the improvement of the **effectiveness** of the QMS and its processes. The new 2015 standard calls for actions on any need for **changes** to the QMS and does not talk about effectiveness.

Conclusion

It is still too early to say whether the new ISO 9001:2015 Quality management systems -Requirement standard will improve organisational performance or not. The standard does recognise that top management are accountable for the effectiveness of the QMS. My personal opinion is that an opportunity has been missed through the output of management review no longer requiring a decision on improvement to **the effectiveness** of the QMS.

References

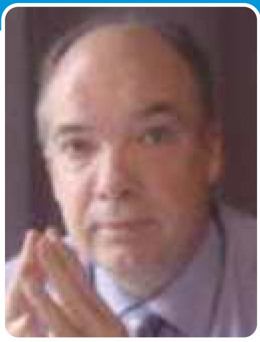
ISO 9001:2015 Quality management systems – Requirements. ISO Geneva.

Paul Harding is the Managing Director of the South African Quality Institute. He represented the hardware (manufacturing) sector of South Africa in the development of ISO 9001:2000. He has been a member of the technical committee TC 176 at the South African Bureau of Standards for the past 23 years.

back to contents page

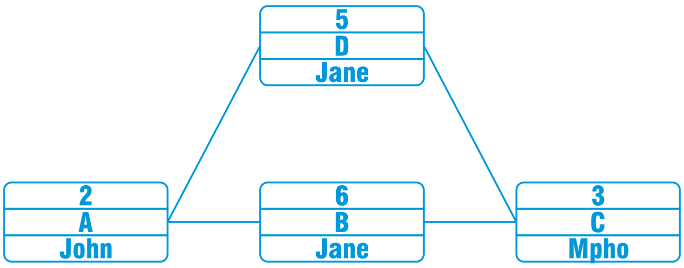
What happened to the Critical Chain?

By Terry Deacon PMP



The Critical Chain Method (CCM) was first included in the 4th edition of the Project Management Body of Knowledge (PMBOK) in 2009, and gained more prominence in PMBOK 5th edition. But to my dismay it has disappeared from the 6th edition. Not even a mention in the glossary.

In 1997 Eliyahu Goldratt improved production scheduling systems using the Theory of Constraints and applied CCM to project management. What is CCM? The Critical Chain is the set of tasks which determines the overall duration of a project after taking resource capacity into account. It focusses on managing the way people behave (avoiding the "student syndrome"), rather than just the task dependencies.



The critical path is ABC and is 11 days in duration.

The critical chain is ADBC or ABDC and is 16 days in duration. Jane cannot work on B and D simultaneously so either B or D must be resourced-levelled to be performed in series.

There is a lot more to CCM than just levelling resources, for example, it uses reverse scheduling, three types of buffers, remaining durations to update task progress rather than percentage complete, and forbids multi-tasking on critical chain tasks. It focuses on achieving a healthy sense of urgency from the outset of a project by stressing that there is no time to lose and minimising delays.

There have been some amazing results using CCM:

- Harris Semiconductors built a plant which according to industry standards would have taken 46 months to complete in just 13 months;
- Israeli Aircraft Industries reduced average turnaround time per aircraft from 12 to an amazing 2 weeks;
- The CSIR were 3 months behind after 4 months into a 12 month project. They then applied CCM and finished one month early.

Theory of Constraints Southern Africa (TOCSA) was established to promote and provide training in CCM. ProjectPro asked Mr Philip Viljoen, if he knew why the PMBOK has dropped CCM. He said, "It does not make sense. CCM and multi-project CCM are more and more being used all over the world in many different project environments with the expected and better shortening of lead times. It is used in healthcare, aircraft maintenance, shipbuilding, construction, new product development, maintenance shutdowns, IT, government, research & development and many more. The number of software tools supporting the rules of CCM has also increased in recent years. All of them boast of numerous satisfied customers."

ProjectPro has also approached PMI in the USA for comment.

Who knows - perhaps the CCM will return to the PMBOK 7th edition in 2021.

If you are interested in knowing more about CCM, join ProjectPro's next Engineering & Construction Project Management or PMI-Scheduling Professional courses by registering on:

http://www.projectpro.co.za/Training/training.html

Project Pro are members of the South African Quality Institute.

back to contents page

Kruger Mpumalanga International Airport Business Breakfast Forum

By Jacques Snyders

On Friday, 17th February, the Kruger Mpumalanga International (KMI) Airport held its First Annual Information Network Lift-Off. The event was held in the form of a "Business breakfast" at the KMI Airport in White River, Mpumalanga. Although the National Weather Services, warned against heavy rains in the area, due to the tropical cyclone, "Dineo", it did not deter the Lowveld business community from attending this first event of the year.

Mr Marcello Martini, HR &Advertising Manager of KMI, opened the session and explained the strategic intent of the Business Breakfast, as a way of bringing the Lowveld Business Community together, and introducing them to various training and service providers who can assist the Business Community with their individual business and training improvement needs. Mr Martini officially opened the new KMI Training and Conference facility, and invited the Business Community to make use of the facility for their personal conference and training needs.

After opening the proceedings, Mr Martini introduced the three guest speakers for the morning. These included Mr Jacques Snyders, Senior Member of the South African Quality Institute, Mr Charl Louw, Automotive Training Academy and Mr Ian Steyn from Agriskills.

After the informative presentations Mr Marcello Martini closed the session, and Business members had time afterwards to socialise and network with each other and the guest speakers.

SAQI would like to thank the KMI team for an excellent first Business breakfast, and wish the team all the best with the next event.

(Mr Marcello Martini Opening the Business Breakfast)

back to contents page

The Nuclear Energy Corporation of South Africa (Necsa) Learning Academy

By Necsa staff

necsa
We're in your world

South African Nuclear Energy Corporation SOC Limited

The National Learning Academy (NLA), was created by Necsa to contribute towards creating the nuclear technology and manufacturing capability to bolster South Africa's innovation, global competitiveness and economic growth. The Necsa Skills Development Centre (NSD), run by the Academy, fulfils its mandate in response to the National Skills Development Strategy. The Centre is fully utilised and continues to attract new clients annually.

NLA is a business unit of Phelindaba Enterprises, which is a division of Necsa designed to provide a well-educated workforce with a technical prowess. NLA provides training interventions for Necsa's identified learning and development needs and, is also the training centre of excellence for nuclear and related industries.

The NLA deliver its services within the following framework:

Technical skills: The NLA develops programs to provide skilled people to participate in advanced manufacturing and maintenance projects. The engineering trades/skills provided area: Electricians, Instrument mechanics, Fitters, Turners, Fitter & Turner, Toolmakers, Millwrights, Welders, Boilermakers and Pipe Fitters

Trade Testing: The Trade testing Centre is accredited by National Artisan Moderating Body (NAMB), Quality Council for Trade and Occupations (QCTO), the Sector Education and Training Authorities Chieta and Merseta and render a service to its clients to qualify their artisans in various engineering trades.

SHEQ: Training is offered according to relevant quality standards such as ASME III, ISO, quality, safety, health and environmental approved programs.

Nuclear Safety and Security: Training in partnership with identified academic and relevant nuclear institutions is offered in specialised programs.

Nuclear Education and Training: In collaboration with relevant national and international partners and organisational experts, courses in nuclear and related technologies are offered through the NLA.

Accommodation: The student residence, which is within a walking distance to the Centre, can accommodate a maximum of 160 people.

SAQI are proud to be associated with Necsa and their development program.

...continue on page 7

A highly accredited nuclear skills training centre that fully meets the needs of all its clients

Necsa: Nuclear Skills Development

nsd
Nuclear Skills Development

necsa
We're in your world
South African Nuclear Energy Corporation SOC Limited

...continue on page 8

Vision

To provide and empower learners with technical and/or statutory skills and to surpass the demand required by clients.

Mission

The NSD is a nationally recognised training facility that is committed to:

- Equipping learners and course participants with specifically focused technical and statutory skills.
- Providing customer directed training and capacity building courses that comply fully with national quality requirements and legislation in the fields of further education.
- Enhancing the skill and competency base of clients to support and enhance sustainable economic growth and prosperity.

Values

In delivering our mission the NSD aims to fully adhere to the following core values:

Service
Provide focused and relevant skills training programmes and services that will add value to learner participants and are geared to customer satisfaction.

Affordability
Design and structure skills programmes in flexible ways which make them easily accessible and economic without compromising on quality.

Quality
Ensure that all the programmes, training and outcomes conform to specified standards for this industry.

Assessment
Strive to obtain measurable and ongoing improvement in our learner-performance output.

Strategic Objectives

To establish and maintain a skills training centre that fully meets the needs of clients, the NSD will strive to build sufficient skills and capacity to satisfy all customer requirements.

The training courses will be designed, developed and presented according to set values. The student demographics will satisfy Employment Equity targets.

Performance Areas

NSD offers skills training in the under mentioned disciplines and statutory courses:

- Apprenticeships
- Section 28
- Short courses
- Safety, Health, Environment and Quality
- Radiation protection

The above will be designed according to statutory, SETA and/or client specifications.

Accreditations

NSD is accredited as a Training Provider and a Decentralized Trade Test Centre by the following:

- The Chemical Industries Education and Training Authority (CHIETA)
- The Services Sector Education and Training Authority (Services SETA)
- The Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA)
- The South African Bureau of Standards (SABS) for ISO 9001

back to contents page

Holding Directors Personally Liable: Where to Draw the Line?

By Terrance M. Booysen, Lucien Caron and Robert Davies

There is no doubt that directors in South Africa are being scrutinised for their role within organisations and far more than in previous times. Board and executive decision-making is being challenged in parliament and in court and, at the very least, some directors have suffered significant reputational damage for not being seen to have properly and diligently fulfilled their fiduciary duties.

Where the old South African Companies Act of 1973 did not specifically spell out directors' functions and duties in detail, the new Companies Act of 2008 articulately records their statutory and common law duties. To this extent, the board is held ultimately accountable for managing the affairs of the organisation, both jointly and severally. Quite different to the previous Companies Act, under the new Act directors are personally accountable for a great deal more when things go wrong, and when this happens the consequences can be devastating for the organisation and its directors.

"Corporate economic crime undermines confidence in business, distorts markets and erodes trust. Companies must be held to account for the criminal activity that takes place within them. I want to restore public faith in business and make sure we have the right tools available to crack down on corporate criminality."
- Sir Oliver Heald, MP (UK Parliament)

Source: Companies face criminal charges over staff fraud (13 January 2017)

Under the old Companies Act, directors were guided mostly by the limited provisions found in the Act, together with the details found in the organisation's Articles of Association and the common law. Moreover, and which is still the case today in the new Companies Act, a director is required to act in good faith, act independently and with a degree of care, skill and diligence that may be reasonably expected of a person of similar standing. Attempting to reproduce a complete list of duties expected of directors under the new Act in this article would be pointless. However, in addition to a director's common law duties, regulators have a long list of duties for which directors can be held accountable should they not fulfil their duties owed to the organisation. Besides a number of critical pieces of legislation which directors *must* understand and apply, such as the Criminal Procedures Act of 1977, the Protected Disclosures Act of 2000 and the Financial Intelligence Centre Act of 2001; directors *must* also be fully compliant to the provisions contained in the organisation's Memorandum of Incorporation ('MOI'). Indeed, if the director holds a non-executive position on a few boards in South Africa, each organisation will have a unique MOI that may also, *inter alia*, address the manner in which directors are sanctioned for poor, reckless and or errant behaviour. Moreover, personal liability including criminal sanction are common cause for concern, yet many directors are blissfully unaware of the immense personal risks they face when they do not fulfil their duties as a director. Even worse is when directors naïvely believe they need only rely on their old practices of simply applying common law in order to 'play it safe'.

In the increasingly litigious environment we live in today, the courts will use the business judgement rule to establish whether the directors have fulfilled their duties. If not, in certain circumstances they can be held personally liable. Moreover, with new legislation being passed, these circumstances of personal liability are increasing and therefore it is critical that directors have an acute understanding of the organisation's affairs, as well as the consequences the law will have upon a director should they default in their legal duties owed to the organisation. Having regard to the matters of director's and their increased liabilities; one really does need to think twice about entering (or maintaining) a directorship position, particularly if the person is averse to the potential risks and reputational damage. It's one thing if a director can mitigate their risks, but when matters are taken completely out of the director's hands and they are still held liable, that is something altogether different and this begs the question of why a person would want to be a director at all.

Similar to the US, the UK is considering legislation that seeks to

...continue on page 10

prosecute directors if employees in their organisation are found guilty of committing fraud, money laundering and false accounting. Whilst it may be commendable that organisations and their boards are first in the firing line in an attempt to curb and prosecute white collar crime; the question is can such legislation be considered fair and reasonable? This would amount to 'strict liability' where directors are held personally liable for the organisation's breach of legislation even though they may have acted reasonably. Given that a board of directors would have implemented proper and robust procedures to protect their organisation from criminal activity, reality proves time and again that the criminals and their sophisticated cartels are most often many steps ahead of the policing authorities, let alone their own board and management. This being said, it is common knowledge that running a business is not without its risks and if legislation such as that which is being proposed in the UK is passed, directors operating under UK law may have no incentive to remain in these positions. Indeed, if the board of directors had complete assurance that their systems could not be marginalised by thieves, that would present an entirely different situation to retain, or even attract new directors. Clearly, passing such a law makes little sense and offers no incentive for directors who apply their minds and act reasonably whilst being blindsided by much smarter employees with criminal tendencies.

Expectedly, it is quite different when directors act recklessly or blatantly for their own interests, or when their actions do not meet the test of the business judgement rule. In this case, we would agree that directors should be held to account by imposing harsh penalties. When one considers the fact that directors are appointed in a fiduciary position, it is criminal when they abuse their position for selfish motivation and personal gain.

There will be a lot of debate in the months to come pertaining to these increased liabilities placed on directors in the UK, and no doubt the fairness and rights of directors will also be high on the agenda. As much of South African law follows the trends of the criminal legislation produced overseas, it would be a grave mistake for any South African director -- or aspiring director -- to ignore these activities. The reason is simply this; once legislation has been passed in another jurisdiction, particularly in the US and the UK, it has an uncanny ability to quickly permeate the legislative frameworks across the world. And even if this is not the case, and the intended legislation was ring-fenced to the US and the UK alone, South Africa is part of their global business village.

It is just a question of time to see how this draconian UK legislation may affect local and internationally based directors, not least also their business risks and decision-making. There is no doubt that the passing of this proposed UK legislation will also impact the relationships directors hold with their employees, and the element of trust between these parties could even find itself being substantially challenged. Being a director has its own unique challenges, and being able to mitigate the associated business and personal liability risks is all part of the challenge when one accepts a position of directorship. However, if the risks of the unknown cannot be calculated and a corporate crime occurs under your watch as a director – notwithstanding your best endeavours to prevent it – it's simply speaking 'game over'.

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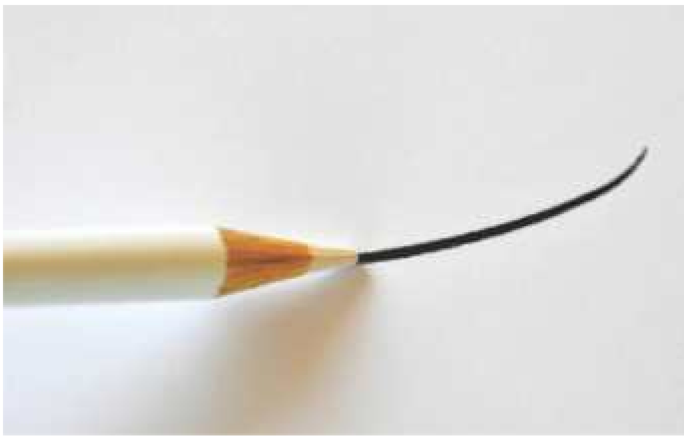

back to contents page

Many of our readers are parents themselves or interact often with children. We have asked our education editor, a retired headmaster, to share thoughts on how to get Quality principles and practices instilled in young people.

Be involved

Richard Hayward

If you're a parent of a school-going child, the start of the year is busy. Besides the buying of stationery, text books, new uniforms and sports equipment, there are all those meetings. The school has most likely invited (rather use the word 'expected'!) you to attend them. They could be to meet your child's teachers or it could be to meet fellow parents.

Meetings take up you time but they're important. Yet they help you understand what's to be done to ensure a happy, enriching year for your child. Often you're told about the scholastic and extramural programme that lies ahead. There could be discussion about your special role in your child's education. Quality schools want your involvement.

Parental – or another adult's caring support – is crucial if one is to give a child a quality education.

Chris Husbands is director of the Institute of Education at the University of London. He spent time in Taiwan, Shanghai, Beijing and South Korea observing what some of the world's highest-performing education systems do to achieve their stellar results. What's the secret?

From his interviews and research questions, a single answer rose to the top: parental support. Parents supported what the schools expected from their children. In Husbands own words:

Everybody I spoke to – the minister, the teacher and the professor, as well as the students, the taxi drivers and the others – thought that what made the difference was the cultural status of education. It's this that produces high expectations, the determination to succeed and the commitment to late-night and weekend homework. (Times Educational Supplement, 27 January 2012, page 490).

Children who achieve both in and outside the classroom have a positive support base. That base could be a parent, a family member, a teacher or another role model. The supporter gives encouragement and praise when there's excellent effort; that person helps children to find the personal courage to persevere through the inevitable tough times.

Positive parental involvement is found in two main areas. In the home, parents ensure that there's a daily adhered-to homework timetable. With younger children, parents check that all the homework has been done. They might need to help children with their reading and revision work for tests. Sometimes children send out SOS messages to moms and dads to help them find suitable material for projects.

Although being supportive in the home situation, the parent avoids negative involvement. That includes doing the child's homework or project. Give guidance but don't do the actual work. Unbelievable but true, there will be the parent who writes the entire speech to be given by their child in a classroom presentation. Besides the lack of ethics by so doing, the child develops what psychologists describe as, "learned helplessness". Cop out of challenges; let others do your hard work.

The second main area of positive parental involvement is at school. Attend those meetings! They're chances to help your child walk successfully down the road of never-ending improvement. The school will value your sincere positive suggestions at meetings. Offer your knowledge and skills by serving on committees, the parent association and the School Governing Body.

Negative involvement at a school could take the form of trashing staff in the car park or while watching sports at a sports event. No teacher, no school is perfect. Yet as parents rightly expect to be treated professionally by the staff, the converse applies.

A teacher might like to believe that they are the most influential person in a child's educational life. The fact is that it's usually not the teacher. Actually, the person with the most long-term impact is likely to be the parent. Give your child that best possible chance. Be involved.

School leadership and management courses are done by Richard Hayward under the aegis of SAQI. Ten of the courses are endorsed by the South African Council for Educators. The courses earn Professional Development points. For more details, please contact him on either rpdhayward@yahoo.com or 011 888 3262.

back to contents page

SAQI Training Programme for 2017

All courses offered by the South African Quality Institute are presented in association with other course providers and are available to all organisations and individuals. 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 discount applies to SAQI members. For more information or to register contact Vanessa du Toit at (012) 349 5006 or vanessa@saqi.co.za

1. Each course listed on the training schedule can be completed individually or form part of the overall three levels of certification.
2. SAQI reserves the right to change details of the programme without prior notice. Click on the course code for a synopsis or click here for all course synopsis.
3. The courses listed below form part of a specific Certificate and all modules should be successfully completed to qualify for the Certificate.
4. Delegates are advised to start on Level 2 before moving on to Level 3.
5. All courses completed previously will receive credit when proof of successful completion is received.

ALL PRICES EXCLUDE VAT

Code	Course	Days	Cost	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
L2	**SAQI Certificate in Quality Control***	**10**	**R 18,874**												
B41	Introduction to Quality Control	2	R 4,277		6-7			22-23		24-25		18-19	16-17		
B90	Introduction to Statistical Techniques	3	R 5,160		8-10			24-26		26-28		20-22	18-20		
B91	Introduction to Statistical Process Control (SPC)	3	R 5,160		27-28				19-21		14-16		2-4	13-15	
B79	A3 Problem Solving	2	R 4,277			1-3			22-23		17-18		5-6	16-17	
L3	**SAQI Certificate in Quality Assurance***	**13**	**R 24,034**												
B48	ISO Requirements 9001:2015	3	R 5,160			22-24						4-6			
B24	Knowledge Management	2	R 4,277			30-31						7-8			
B16	Internal Quality Auditing	3	R 5,160				10-12					27-29			
B92	Advanced Quality Techniques	3	R 5,160					8-10					30-1		
B77	Advanced Product Quality Planning (APQP)	2	R 4,277					11-12						2-3	
L4	**SAQI Certificate in Quality Management***	**15**	**R 31,706**												
B38	Development of a QMS	5	R 10,693						5-9						
B01	Cost of Quality	2	R 4,277						29-30						
B58	New SA Excellence Model	2	R 4,277							13-14					
B74/B76	Lean for Manufacturing/Service Industries	4	R 8,182								1-4				
B93	Policy Deployment (Hoshin Kanri)	2	R 4,277							11-12					

* Must successfully complete all modules listed to qualify for the certificate.

DOWNLOAD TRAINING REGISTRATION FORM

INHOUSE

Above and beyond the courses listed on the left, we can also provide your company with inhouse training on the following topics.

- Incident and Accident Investigation (B82)
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- Introduction to OHSAS 18001
- Inventory and Warehouse Management (B86)
- Lean Six Sigma Yellow Belt (YB)
- Lean Six Sigma Black Belt (BB)
- Production Planning and Scheduling (B85)
- SHEQ Internal Auditing (B49)
- Supply Chain Management (B84)
- IT Process Improvement courses

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back to contents page

For a list of other courses provided, please visit www.saqi.co.za
Inhouse courses provided to 10 or more delegates