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President's Message | Santosh Khadagade



Greetings from NCQM!

The COVID-19 pandemic is on top of every agenda across the globe. We hope all our members and well-wishers are taking adequate care against this pandemic. There is enough information available on internet, social media platforms, and television as well as government communication channels. We have however tried to gather information from some of our members who have either resumed operations or were continuing operations under essential services during the various lock downs. We believe the ground level information will definitely help our members to improve their safety precautions at work place.

Availability of knowledge however does not ensure strict adherence especially when it comes to following safety norms. We have seen several reports about not using PPEs as a routine. Every audit perhaps has this as a permanent item in the list of non-conformities. Communications through awareness programs, training/re-training, special campaigns on the use and right use of PPEs is the only solution.

On the other side, readiness of the organisations to deal with Industry 4.0 with Quality 4.0 has become critical and there is urgent need to catch up without any delay. Article on Quality 4.0: Past and Future captures in detail the historical phases of the industrial revolutions and role of quality.

Industry 4.0 is a necessity and it is progressing with great speed across the industry. Use of the technology for quality related work would need understanding the nature of technology. All types of manual activities need to be digitised and put on connected devices. The quality professionals would need to speed up on the use of monitoring and improvement data at par with the IT and R&D Teams.

At NCQM, we will be bringing out the newsletter on bi-monthly frequency starting the current issue. This will enable us to improve on the communication. We will be delivering free seminars on monthly basis rather than quarterly basis done so far starting July 2020. For other services such as training and consulting, we are ready to deliver the services through video conferencing solutions. Please email your queries, feedback, requirements to president@ncqm.com or ncqm@ncqm.com.

Once again wishing every one good health and safe work environment! Be careful, be Safe!

NCQM Training Offerings

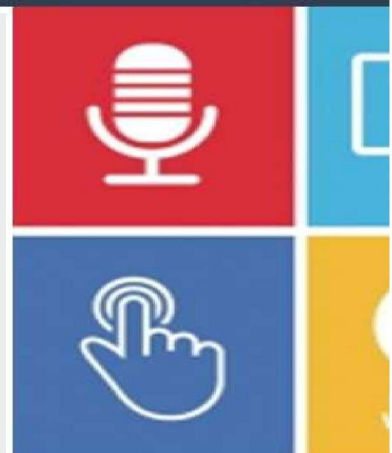


WEBINARS

NCQM is planning to conduct free webinars on topics related to quality management. We would like to encourage our members to take advantage of this learning opportunity by attending these webinars.

NCQM is also happy to offer a platform to those members who are interested in conducting webinars and sharing their experiences in the field of quality.

Please write to us at president@ncqm.com with your presentation for evaluation.





Workplace Practices during COVID 19 pandemic

The COVID 19 pandemic has created a new health risk across the globe. The COVID 19 virus is highly infectious and severe on people with co-morbidities or low immunity. Although it is unknown to us and the fatality rate is low, it has managed to create a fear around the globe. Vaccines are still between 8 – 18 months away.

Initially, we have managed to deal with it by preventing infections through strict lockdown of social and economic activities. However, we have to now open up social and economic activities else we will have the problem of death due to hunger on our hands. As we open up social and economic activities, it is imperative that we take adequate precautions to sustain health and safety of our people.

Organisations are leading the way in this regard by adhering to guidelines laid down by National Disease Control associations such as ICMR and they are also improving upon those practices. This article is result of the feedback we gathered from some of our members who have either resumed or sustained operations during the pandemic.

Background

Organisations initially implemented the practices that were made available by the Government authorities. As they implemented and understood the principles behind these practices, they started improving upon them. Some organisations were working through the pandemic with about 25% - 30% staff while others were locked down for 45 – 60 days before resuming operations. Most organisations had majority of their workforce come from nearby areas or cities and used to commute to work using their personal vehicles.

Workplace practices

Safety precautions and practices as prescribed the Government authorities were implemented effectively within all organisations viz.:

- Thermal Temperature recording at entry point
- Daily briefing and asking questions regarding health
- Mandatory use of masks (pair of reusable masks provided to every employee and contract labour)
- Shoe sterilisation
- Hand sanitisers provided at multiple locations in the factory
- Mandatory Hand washing at periodic intervals
- Social distancing at workstations or on assembly lines
- General Sanitation of the plant with Sprayers on daily/weekly basis
- Medical certificate and health self-certifications for contract employees
- Reduced workforce in 1 or 2 shifts.

NCQM would like to sincerely thank the following Corporate Members for candidly sharing their practices and views for the benefit of other members and the quality fraternity:

- **American Spring & Pressing Works Pvt. Ltd.**
(Mr. Jatin Patel, Technical Director)
- **Evergreen Electricals Pvt. Ltd.**
(Mr. Satish Shenoy,
Group MR & Manager – Operations)
- **Garware Polyester Ltd.**
(Mr. A. S. Raodeo,
DGM – Systems & Technical)
- **Gini Silk Mills Ltd.**
(Mr. Neeraj Purohit, General Manager)
- **Jain Irrigation Systems Pvt. Ltd.**
(Mr. Rajiv Sarode, Senior Manager)



- **Aarogya Setu app** made mandatory for all employees and contractors



Some companies have gone beyond the current prescribed standards and implemented additional practices viz:

1. **Contactless** – Companies have put in place practices to ensure zero contact with surfaces and people:
 - a. Moved to RFID cards and sensor-based sanitisation stations to ensure no contact.
 - b. No contact between employees and contractors or outsiders (such as truck drivers, etc.)
 - c. Interdepartmental movements restricted and all conversations conducted through phone calls.
 - d. Marketing, Sales and Technical discussions with customers moved to online mode.
 - e. Number of internal meetings reduced and conducted online.
2. **Careful** – Companies have taken extra precautions despite adding to their administrative burden to secure employee safety and health:
 - a. Organisations ensured operation of multiple gates (where possible) for facilitating faster entry while maintaining social distancing.
 - b. All employees were administered a questionnaire every fortnight to gather information on their health, their family's health, and their travel history. This information

helped monitor employee health and identify health risks in advance.

- c. Canteen services were discontinued by most companies. However, some operated canteens but provided home-cooked food from verified vendors. Social distancing was ensured by segregating break timings.
 - d. For all chemicals (used in sanitisation and cleaning), Material Safety Data Sheets (MSDS) were created, maintained and adequate training provided on handling them safely.
 - e. Oxygen meters were procured and used for checking incidence of hypoxia amongst vulnerable staff.
3. **Customisation** – One organisation decided to customise their strategies based on the perceived health risks. In order to implement the same, workforce was divided into three categories based on perceived health risk viz:
 - a. Category A (Transporters from all over India), Category B (Staff Bus, Contract taxi drivers, Gardeners) and Category C (Employees).
 - b. Based on these three categories, strategies were worked out to deal with the risks. e.g. Category A and Category B workforce were provided separate toilets and restricted access within the company premises.
 4. **Compliance** – Companies also put in place a mechanism to evaluate the compliance of new workplace health and safety system:
 - a. One of the organisations defined a Standard Operating Procedure (SOP) for the health and safety practices to be implemented during this COVID 19 pandemic.
 - b. Training on personal hygiene, social distancing, and precautions to be taken at work was provided to every employee including contract labour.
 - c. Creation of templates and logbooks to record evidence of implementation of practices. e.g. logbook for sanitisation of staff buses, etc.
 - d. Surprise checks to ensure sanitisation carried out, masks being worn, social distancing being maintained using cameras, etc.
 - e. Periodic internal audits of the system as a whole to ascertain effectiveness of actions.
 - f. Employees themselves were following all the health and safety norms without much supervision.
 5. **Candid** – Some companies were candid about the



organisation's financial position with their employees and involved them in these conversations. Interesting results were seen:

- a. Employees displayed a sense of responsibility and handled work outside their own sphere of work. Result – they either got multi-skilled or utilised their multi-skilling training.
- b. Employees also came up with small improvement ideas to manage costs. e.g. sanitisation mats (mats soaked with sanitising solution for cleaning shoes)
- c. Companies have also focused on how to expand their product portfolio within their existing capacity. e.g. diversifying into PPE and sanitisation products.

6. Community Service – Companies also ensured that they help the community in their neighbourhood through:

- a. Establishing community kitchens for the poor, destitute and migrants.
- b. Sanitisation of public roads and areas.

Conclusion

This is the first phase of recovery. Organisations are getting ready to embed these safety and hygiene practices into their regular way of working. The investment in these practices will improve the quality of hygiene and health within the organisation and society. The COVID 19 pandemic in some ways has been a blessing. We, as a nation, have come together to create a better quality of life for our people through sound and innovative workplace health and safety practices.

“It is impossible to improve any process until it is standardized. If the process is shifting from here to there, then any improvement will just be one more variation that is occasionally used and mostly ignored. One must standardize, and thus stabilize the process, before continuous improvement can be made.”

~ Masaaki Imai ~

ISHRAE COVID-19 GUIDANCE DOCUMENT FOR AIR CONDITIONING AND VENTILATION

1. The user of the owner should get the area sanitized.
2. Study the fresh air and exhaust system adequacy as per the guidelines and inform the user to modify the system if found inadequate.
3. Carry the preventive maintenance on all the units as per manufacturer's guidelines. This should include disinfecting cleaning of :
 - a. Filters, grilles, diffusers & internal surfaces : it is recommended to use 5% Cresol solution (containing 50% Cresol and 50% Liquid soap solution). Mix 1 litre of this solution in 9 litres of water. The surface shall be sprayed with this solution, left for 10 minutes and then washed / wiped clean with water / cloth. (the above methodology is only for washable filters)
 - b. Condensate drain pan : Disinfecting / treatment of condensate drain pan is suggested using UV treatment or 1% sodium hypochlorite dosing. This will apply only if the HVAC equipment is working on a re-circulatory mode.
 - c. Coils : Follow standard recommendations of coil cleaning and then sanitize using the same protocol as that of the filters specified above.
4. In case the area has ducted air distribution, it is advisable to clean the ducts by an appropriate method that may include sanitization.
5. The following process is recommended at start-up :
 - a. Open all the doors and windows of the space.
 - b. Ensure that all cleaning protocols as advised above are complete
 - c. Run the fresh air system at the maximum intake of air setting.
 - d. Start and run the exhaust systems if available.
 - e. Start the air conditioning system in fan mode only, without filters and run it for minimum of two to four hours with doors open and exhaust system operational.
 - f. Install the clean & sanitized filters
 - g. Start the AC in normal mode and run for two hours with doors open and then close the doors and windows.
6. The fresh air and ventilation system should be kept on throughout the off cycle and on the weekend and holidays in air circulation mode.

Source: https://ishrae.in/mailer/ISHRAE_COVID-19_Guidelines.pdf

These practices have been extracted from a review of blogs and articles that have appeared on the subject in recent times.

Practices for leading the organization during a crisis

1. Although immediate task or problem takes precedence, try to link action to some prevailing purpose.
2. Create top down singular focus for the organisation.
3. Understand importance of threat, plan for immediate needs for day/week ahead and create central crisis response team outside of operations teams.
4. Rebalance organisation and delegation towards speed and away from efficiency.
5. Ensure speed of action by bypassing unhelpful systems but declare every such bypassed action to Senior Management for review every day/week.
6. Communicate frequently within the organisation - provide context, give right people all the information to make decisions.
7. While communicating externally, critically review the communication and then communicate. Sometimes transparency may be used against you.
8. Maintain deliberate calm and bounded optimism.
9. Make decisions under uncertainty - follow cycle of Pause-Assess-Anticipate-Act. To assess and anticipate ensure you are updated on new information and review decisions critically.
10. Once you decide, act quickly.

Practices for taking care of your people during a crisis

1. Demonstrate empathy - deal with human tragedy as a first priority.
2. Encourage people displaying leadership at all levels and recognise them with simple acts.
3. Intervene when people push themselves too hard and ensure they stay healthy.

Practices for taking care of yourself during a crisis

1. Stay healthy by sleeping well, eating right, and exercising.

2. Do not lose sight of who you are, what you stand for and what is important to you.
3. Adapt your personal operating model.
4. Regulate your reactions, practice reflection, reframe your perspective and manage energy.
5. Find someone at work with whom you can talk about your fears and insecurities.

References

1. *Leading through Crisis* - David Oxley, Group Vice President, BP
2. *Leadership in a crisis: Responding to the coronavirus outbreak and future challenges* - Gemma D'Auria and Aaron De Smet, Mckinsey Mar 2020
3. *How to demonstrate calm and optimism in a crisis* - Jacqueline Brassey and Michiel Kruyt, Mckinsey Apr 2020

HEALTHY BUSINESS HEALTHY LIVING



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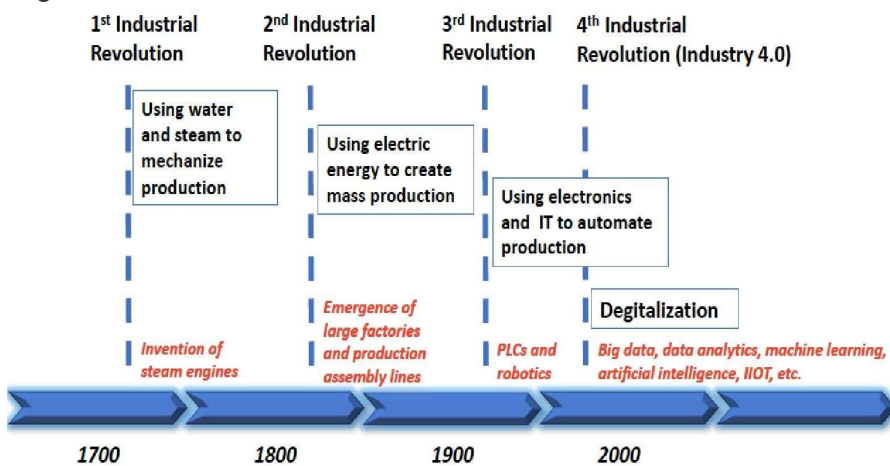
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Quality 4.0 is becoming a hot topic nowadays among quality professionals as the equivalent quality term to Industry 4.0! It is true that quality has always been a product of the industry and has evolved over the past decades as the industry kept on evolving, but before we define Industry 4.0 and Quality 4.0, and in order to understand what is changing, let us first step back in time and remember how quality evolved as a product of the industrial revolutions.

Most of us know the history of the industrial revolutions: the first industrial revolution was characterized by the use of water and steam to mechanize production towards the end of the 1700s. Then came the second industrial revolution in the late 1800s, which was characterized by the use of electric energy to create mass production. Then came the third industrial revolution in the late 1960s and early 1970s with the use of electronics and information technology to automate production lines. This third revolution was characterized by the use of PLCs and robotics. During the 2000s, a new industrial revolution began at the dawn of the digitalization era that is characterized by big data, data analytics, machine learning, artificial intelligence, and internet of things, to name a few.

Figure 1. Industrial Revolutions



But how about quality? Quality started as a product of the second industrial revolution with the need for inspectors to make sure production personnel were not making non-conforming products and stayed as a reactive approach until the third revolution when the advancements of electronics and PLCs allowed the use of proactive approaches. New philosophies, such as Total Quality Management, Six Sigma and lean, emerged between the 1980s and the 1990s. .

Digitalization is the main driver bringing the term Industry 4.0 to life. It is all about big data, machine learning, cloud storage, advanced analytics, collaborative robotics, connectivity, and internet of things, where decisions are made faster because information is received faster. Here, data go directly to machines that are learning as things are happening and where millions of sensors and connected devices are sharing and exchanging information. The increasing intelligence and connectivity of “smart manufacturing systems” along with new



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technological innovations led the quality community to think of a new definition to quality.

But Quality 4.0 does not focus exclusively on the technology itself, as Industry 4.0 does, but rather on the improvements in culture, collaboration, competency, and leadership made possible by that technology. Also, it is worth mentioning that Quality 4.0 is not replacing the traditional quality methods and techniques but improving them.

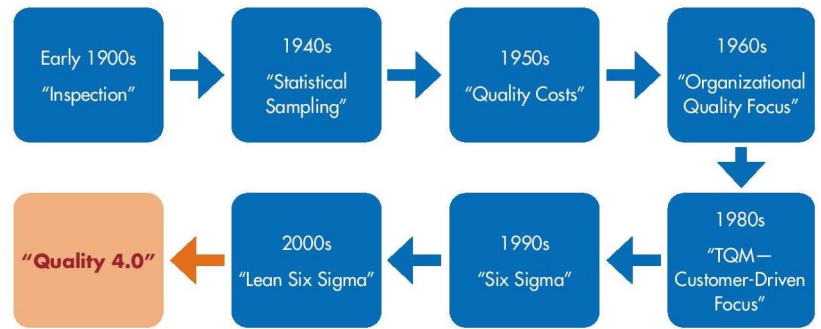
Now as we already defined Industry 4.0 and Quality 4.0, let's have a quick look at some of the technological advancements that are set to dominate the 2018 – 2022 period and have already started disrupting the current state of industry, things like high speed mobile internet, Artificial Intelligence (AI), widespread adoption of big data analytics, Internet Of Things (IOT) and cloud technology. Not only the emergence of these technologies is disrupting the industry from methods and techniques perspective but also disrupting the industry from a human perspective.

In a recent study published by the World Economic Forum in The Future of Jobs Report 2018,¹ a new human-machine frontier within existing tasks has already begun: in 2018, the 71% of total task hours performed by humans is projected to drop to 58% by 2022—this is a 18% decrease in total task hours performed by humans. On the contrast, 29% of total task hours performed by machines in 2018 is projected to increase to 42% by 2022 – this is a 49% increase in total task hours performed by machines.

This does not look good when we look at the technology advancement from a human perspective, but on the flip side, we can look at the technology disruption in a positive way. Think of the current statistical methods that rely on sampling to draw conclusions. With the availability of big data, do we still need to do sampling? Think of data warehousing and Business Intelligence (BI) software packages making spreadsheets and pivot tables less effective! Think about machine learning replacing Design of Experiments (DOE)! Think about text analysis helping organizations with Voice of Customer (VOC)! Think of how easy it is to perform multiple and complex regression analysis!

With that said—and in order to mitigate the risks of technological advancements on the human side

Figure 2. Journey of Quality from 1900s until the present time



and the risk of job losses—let's look at the future jobs landscape and explore the new positions that would definitely help existing quality professionals and those young generations entering the job market—new jobs like data analysts or data scientists, AI and machine learning specialists, big data specialists, process automation specialists, innovation professionals, and training and development specialists. This is where Quality 4.0 comes in to help facilitate and coordinate such efforts.

Adoption and deployment of Quality 4.0 strategies will significantly help organizations and professional to be ready for Industry 4.0 and the disruption caused by the technological advancements. To make this point more clear, think of who's taking the lead nowadays when it comes to controlling and managing quality monitoring and improvement data? A recent study by LNS Research² revealed that a large portion of quality professionals do not have a clear understanding of the new technologies of Industry 4.0, and therefore quality cannot be in a leading role to take charge of Quality 4.0 initiatives as we speak!

From there we can see the importance of adopting Quality 4.0 to help organizations and quality professionals as Quality 4.0 would use that technology to improve:

Culture: Through better connectivity, visibility, connected devices, better and faster data collection and analytics, use of apps, etc.

Compliance: Through sharing compliance approaches across different business units, divisions, sites, even suppliers, vendors, and sub-contractors. Through expanded configurability to processes like CAPA, 8D, NCR, integrated Information Technology (IT) and Operational Technology (OT), etc.

Collaboration: Via automatic collection of supplier performance data, customer complaints, real-time



SPC data, real-time quality metrics, etc.

Data Management: By helping organizations achieve real-time visibility of vital quality metrics via effective collation of data from various sources to empower informed and agile decision-making processes.

Analytics: As machine learning and artificial intelligence allow prescriptive analytics to predict failure and inform actions to be taken, this changes the entire landscape of the existing descriptive metrics that only provide information of what had happened or why it happened.

Connection: By connecting people, products, devices and processes. Think of the connection between information technology tools such as Enterprise Resource Planning (ERP) or Product Lifecycle Management (PLM) with the operational technologies used in machines and laboratories then linking them with people, via smart devices or wearables, and the devices that are able to perform

data analytics. Leveraging such connectivity allows real time collection and real time feedback and decision making.

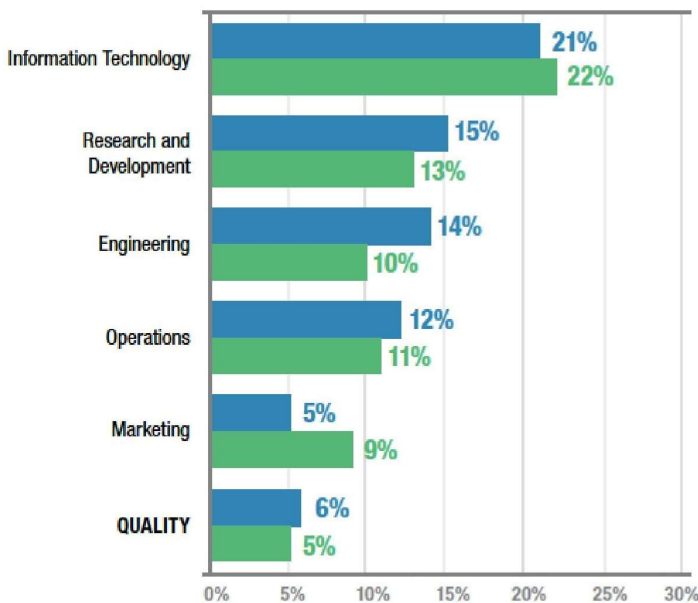
In the end, I believe it is about time to ask quality professionals “is it time to learn a new language?” As part of their evolution, quality professionals have learned many new languages over the years. They learned the language of senior management and became aware of ROI, cost of poor quality, impact of

waste, scrap, and downtime. They learned the language of sales and customer service and became aware of profit margin and cost per employee. They learned the language of design and development and became aware of Quality Function Deployment (QFD), design for Six Sigma, testing, validation, and verification. They learned the language of project managers and became aware of gate reviews, project planning, milestones, resource planning, and risk management. So how about the language of technology? We will not be able to replace technology with people—that time is long gone and we all see and feel the benefits of automation and robotics in the workplace, but we still need the professionals who are able to program and manage the technology. Those are the future quality professionals, who have the full understanding of the traditional quality methods and at the same time are fully capable of manipulating the new technology.

References:

1. World Economic Forum, *The Future of Jobs Report 2018*. www.weforum.org/reports
2. Dan Jacob, *Practice Director and Principal Analyst, Quality 4.0 Impact And Strategy Handbook – Getting Digitally Connected to Transform Quality Management*, LNS Research. www.lnsresearch.com

Figure 3. Who is taking the lead with quality monitoring and improvement data?



NCQM NEWS

WELCOME ABOARD - NEW MEMBERS

Membership Category	Membership No.	Member Name	Location
Senior Life Member	SL0146	Mr. Shrikant Palange	Pune
Individual Life Member	LO0157	Mr. Umesh Bhagwat	Thane
Senior Member	SM0161	Mr. Ram Teja Ganta	Hyderabad

A Concise Guide on Creating and Updating Documented Information

This book is a concise guide for creating and updating documented information in organizations implementing ISO 9001:2015 quality management system (QMS). It is helpful to executives and professionals having responsibility to implement QMS in the organization.

Here is a preview of the contents of this book:

- Preface
- List of questions on documented information
- Documented information in ISO 9001:2015 QMS
- Structure of documented information
- Purpose and benefits of documented information
- Is quality manual required?
- Developing documented information
- Quality manual (or QMS manual, description book or instructions manual)
- Procedures
- Work instructions
- Forms
- Quality plan
- Approval of documented information
- Bibliography

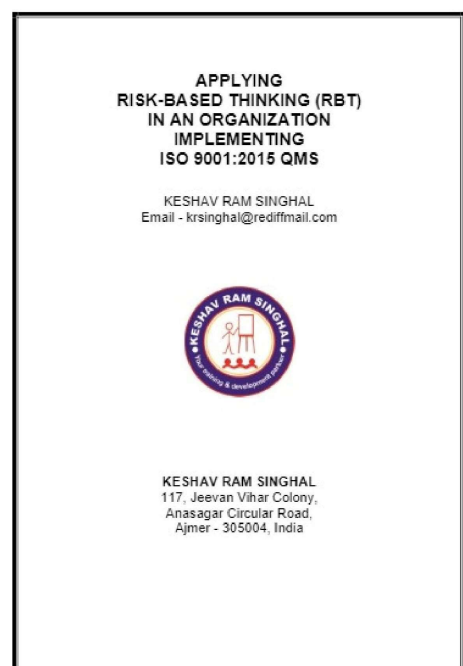
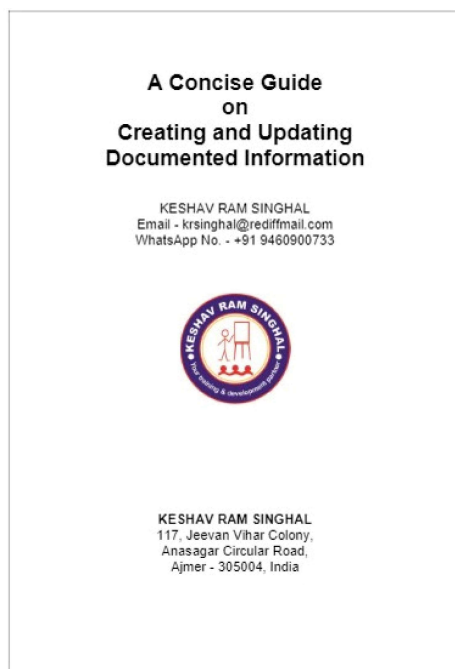
Applying Risk-based Thinking in an Organization Implementing ISO 9001:2015 QMS

This book is a concise guide for applying Risk-based Thinking in an organization implementing ISO 9001:2015 QMS. It is helpful to executives and professionals having responsibility to implement QMS in the organization.

The book contains 32 chapters covering Introduction to risk based thinking, risk definition, Need for risk-based thinking, Benefits of risk based thinking, risk awareness culture, formal risk management approach, detailed understanding of ISO 9001:2015 clauses 4 and 6, tools used in risk management and examples of risks & opportunities. The author also provides a bibliography and an evaluation questionnaire for putting risk-based thinking into practice.

If you wish to get these concise guides, please see link below:

https://store.pothi.com/browse/?sort_by=newest&language=English&category=Business+%26+Economics





DIPLOMA IN TOTAL QUALITY MANAGEMENT (Distant Learning Mode / Online)

Focuses on

TQM, TPM, 5 S, Kaizen, Kanban, JIT, TPS & Lean Six Sigma
Statistical Process Control techniques with applications
ISO 9001 QMS, ISO 14001 EMS, ISO 45001 OHSMS, IMS, IATF 16949 and
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Paper-IV - Additional Tools and Techniques
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Statistical Process Control techniques with applications
ISO 9001 QMS, ISO 14001 EMS, ISO 45001 OHSMS, IMS, IATF 16949 and
few other sector-specific Management Systems
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Paper-II - Statistical Process Control (SPC)
Techniques with applications

Paper-III - Quality and other Management
Systems

Paper-IV - Additional Tools and Techniques
for Organisational Excellence

Paper-V - TQM in Service Industries / TQM
in Manufacturing Industries (any one)