

# **Issues and Improvement Opportunities in Management System Internal Audit – A Survey**

**Edly F. Ramly**

Certification Director  
EFR Certification Sdn Bhd, Malaysia  
[e.ramly@efrcertification](mailto:e.ramly@efrcertification)

**Hood Atan**

Lead Auditor/Principal Consultant  
Exergy Management Consultant PLT, Malaysia  
[hood.atan@yahoo.com](mailto:hood.atan@yahoo.com)

**Mohd Soffian Osman**

Senior Operation Manager,  
Safety Management Academy Sdn Bhd, Malaysia  
[soffian@rafflesiagroup.com.my](mailto:soffian@rafflesiagroup.com.my)

## **Abstract**

Quality Management System (QMS) internal audit is one the requirements of ISO9001:2015. In 2016, it was estimated that more than 1.6 million organizations certified to ISO9001. Each organization that is certified to ISO9001 has to undergo internal audit process. However there are critiques that internal audit does not provide value added to the organization. The objectives of research are to determine issues in implementation of internal audit and to determine the improvement opportunities in implementation of QMS internal audit. Survey questionnaires were distributed to 71 practitioners, managers, executives, and consultants during the seven sessions of internal audit trainings and workshops conducted in 2016 and early 2017. The main issues determine from the surveys are: 1) Time consuming; 2) No rewards and recognition for the auditor; 3) No value added audit findings. The findings of study also indicated that effective internal audit improvement should be based on issues determine above. It believed that the implementation of improvement opportunities in QMS audit can provided value added to organization performance improvement and exciting QMS internal audit.

**Keywords:** Operational Diagnosis, Quality audit, Continual Improvement, Performance improvement, ISO 9001:2015.

## **1. Introduction**

For the organization to maintain their quality management system based on ISO9001 standard, the organization is required to undergo internal audits. Internal audit is one of the approaches that have been found useful to determine the opportunities for improvement for organization. Rationale of internal audit is to assist organizations in enhancing customer satisfaction through extensive internal and external audit (Psomas & Fotopoulos, 2009). Since, internal audit have been in the market for almost thirty years, the standard of auditing have undergo several phase of improvement. The first standards was developed by American Society for Quality Control in 1984, followed by guideline published by ISO in 1991. Following that, the standard guideline for quality auditing such as ISO10011 (ISO, 1991), ASQ Quality Audit Handbook published in 1997 and recent update in 2012 (Smith, 1997; Russell,

2005; Russell, 2012;), and ISO19011 published in 2002 and recent update in 2011 (ISO19011, 2011). Base on the fact above, quality audit is one of the most mature diagnosis approaches. There are numerous papers and guidelines for quality audit modalities that clearly describe the approaches and method for quality (Rajendran & Devadasan, 2005).

However, based on study by Martínez-Costa et al (2009), ISO 9001/2000 certified companies do not perform noticeably better than non-certified companies and internal audit has been criticized for not delivering added value to organizations. Same issues have been raised previously by Rajendran & Devadasan (2005) and noted this may be due to quality audit not focusing in baseline performance improvement. Furthermore, quality audit have been reprehend as high implementation costs and maintenance costs (Casadesús & Karapetrovic, 2005; Leung et al, 1999; Stevenson & Barnes, 2001). It is support by critique from Hepner et al. (2004) stated that audit has been regarded traditionally as “added cost” activities and fail improve the organization performance. The cost in auditing includes the audit fees; time; and resources required to entertain the auditor and conduct audit for internal audit. The additional cost included the cost to entertain the external auditor; consultation cost, preparation cost, and responding to audit findings, and many other intangible cost incurred due to quality audit (Karapetrovic & Willborn, 2000) and Daniels, 2000). Apart from the cost issues, quality audit also been criticized for not providing the actual performance improvement, management and staff bored with assessment process, too focused on assessment and no guarantee on defects prevention (Williamson et al, 1996).

Based on criticism above, the objectives of research are to: 1) determines the degree of agreement of the issues describes from previous literature; 2) determine the improvement opportunities in implementation of QMS internal audit. The results from the research and implementation of improvement opportunities in QMS audit can provided value added to organization performance improvement and exciting QMS internal audit.

## **2. Methodology**

Planning and implementation of this study is summarized in figure 1. Planning for survey start with development of questionnaire based on ISO19011 frameworks and issues of management system audit raised in management review. The survey structure is mixed with close and open type of survey questions. The closed type of questionnaire consists of scale in between one to five with space to fill in additional comments where the respondents were requested to: (1) tick at the appropriate box given; (2) select the degree of importance and agreement based on Likert Scale given; and/or (3) Write the answer in the space provided. The questions were arranged sequentially in several sections according to its purposes to make it easy for the respondents to answer. In order to provide clear instructions, a short introduction about the Content and purpose for each section was provided.

Pilot evaluation survey is plan and conducted to determine the suitability of the questionnaire construct and structure. Once the construct have been improved, several organizations were invited to join the survey workshop. The workshop presentation was develop by using Microsoft PowerPoint and presented to workshop participants and was conducted in September 2016 to September 2017.

The sampling strategy in this study is purposive sampling consist of participants from organization management system auditor from several organization that invited to participate in the workshops. The reason for choosing this sample was due to the respondents' knowledge and / or experience in the management system audit. Initially, the potential respondents were expected to be at least 50 people from 5 organizations. Survey data were administered and analysed using Minitab version 13 and Microsoft Excel.

Process Flow	Process Description	Comments/ Remarks
<pre> graph TD     A([Develop Questionnaire]) --&gt; B[Pilot Survey]     B --&gt; C[Evaluation Survey]     C --&gt; D{Report and refine}     D --&gt; E([Discussion and Conclusion])                     </pre>	Develop the evaluation survey questionnaire	3 Sections of questionnaires
	Conduct Pilot evaluation survey workshop	Total 11 respondents and conducted at Workshop 1 organization. Improve the survey questionnaire.
	Conduct evaluation survey workshop	7 workshops (not include pilot) conducted start from sep 16 and end in Sep 17
	Report the findings	Analyze the result and note the comments
	Discussion, Recommendation and Conclusion	Discussion and conclusion

Figure 1 : Process flow for survey

### 3. Results

Based on a total of 8 workshops conducted including 1 pilot workshop. In total 71 respondents returned the questionnaires which represent 99% returned of questionnaire. Summary of number respondents by each workshop is shown in table 1. Only 1 questionnaire was returned without comment, hence only 70 survey results were analysed. Therefore, this study would unlikely to have been affected by a nonresponse bias.

The main findings from this survey are summarised into two areas as the questionnaire is divided into two main section which are: (1) Degree of agreement of each issues in internal audit, and (2) Degree of agreement of contributions factors. A five point Likert scale with 1 box to indicate don't know was used to represent the degree of agreement for every section:

- Strongly agree = 5
- Agree = 4
- Neutral = 3
- Disagree = 2
- Strongly disagree = 1

Table 1 : Summary of evaluation survey workshop

Workshop	Type	Industry	Respondents
Workshop Pilot	Manufacturing	Plastics	11
Workshop 1	Service	Hospital	11
Workshop 2	Manufacturing	Rubber	7
Workshop 3	Manufacturing	Food	8
Workshop 4	Manufacturing	Metal	6
Workshop 5	Manufacturing	Automotive	10
Workshop 6	Service	Consultation	7
Workshop 7	Manufacturing	Metal	11

### 3.1 Degree of agreement of each issue in management system internal audit

Section 1 of the evaluation survey questionnaire asked for the respondents' perception of the degree of agreement of each issue in management system audit. The results were summarised in Table 2. Both average and mode were used to analyse the Likert Scale data. Two incomplete data were omitted with the total 69 data used for analysis. Referring to Table 2, all issues average are more than 4, indicate that all the respondent either strongly agree or agree with the phase and step. There was only 3 respondents provide score of 2 in issue 4. In addition, even there was more 90% respondent rate as "strongly agree=5" and "agree=4", there are also indication of respondents stay as neutral. However, none of the respondents left any comments on the reason why they are stay neutral with the issues. The result indicated that the respondents are strongly agreed with the issues highlight in the survey.

Table 2 : Summary of degree of agreement of each issue in management system internal audit

Issues	Average	Count '5'	Count '4'	Count '3'
<b>A. Auditor perception</b>				
1. Disturb their day to day job to conduct the audit;	4.40	30	38	2
2. Lack of support from auditee;	4.39	30	37	3
3. Need to be well verse in standard requirements;	4.37	29	38	3
4. No motivation factors for auditor i.e. allowance or special benefits;	4.93	65	5	0
5. Time constraint during the audit.	4.41	33	33	4
<b>B. Auditee perception</b>				
1. Been penalized if received findings;	4.33	28	37	5
2. Additional work/ time consuming if received findings;	4.36	30	35	5
3. Disturb routine activities;	4.39	30	37	3
4. Difficulties in understanding auditor needs.	4.37	29	38	3
5. The finding does not help to improve/ not add value	4.40	31	36	3

### 3.2 Degree of agreement of contributions factors

The second set of questions aimed to determine the degree of agreement on each potential contributions factors for effective management system internal audit. Simple statistical analysis was used to analyse the mean of each enablers from the score provided by the respondents. Table 3 presents the summary statistics of the results and the breakdown of factor 1 to factor 4 according to the results obtained from the survey results.

Table 3 : Summary of Degree of agreement of contributions factors

Factors	Description	Mean	Std. Deviation	Count '5'	Count '4'	Count '3'
F1	Audit Planning	4.36	0.56	28	39	3
F2	Top Management	4.28	0.57	24	42	4
F3	Auditor	4.27	0.56	23	43	4
F4	Auditee	4.26	0.58	23	42	5

It can be seen from the data in Table 3 that it is apparent that each factor have almost same mean and standard deviation. Over half of those surveyed provide the score of 4 and minority of respondents (5.8%) provided score of 3. The participants on the whole demonstrated that they agreed or strongly agree on the factors of the diagnosis framework. In addition, most of respondent provided the comments and recommendation for effective internal audit as discuss in discussion section.

## 4. Discussions and recommendation for improvement

The issues can be classified into time related factors, reward and recognitions, non-value added findings, top management support and auditor competency. As the evaluation survey is mixed with close and open type of survey questions, the feedback on the open questions consist of comments, statements of agreement, and suggestions for improvement. Overall comments were consisted of agreements with the statement.

For time related factor, there are comments such as “can make internal auditing easier in term of auditing documentation and reporting”, “effective auditing planning including time off for auditor” and “better to have full time auditor”. As for reward and recognition, most of comments indicated “it is a good method to motivate the auditors”. At the same time issues were raised on top management support and auditor competency such as “management fault findings”, “difficulties in dealing with auditee”, “difficulties in identifying area of concern” and “difficult to under the area the standard requirements”.

The participants on the whole demonstrated the issues can be solved through some of the comments such as:

- Auditor explaining the risk and/ or impact of the findings related to quality and productivity;
- The auditor should provide the step to determine root cause;
- Auditor recommended the solution including the benefit of the solution;
- Top management shall make improvement;
- Utilized the internal audit findings as the project selection for small group activities project such as quality control circle (QCC) and Innovation Creative Circle (ICC);
- The auditor should provide prioritization on the findings.

Hence the recommendation for improvement can be prioritized as followed: 1) Effective audit planning and procedure; 2) Top Management support and 3) Evaluation and reward for effectiveness finding.

The audit planning and procedure should include the method to plan, conduct and reporting of audit. The method to plan should include the auditor selection process that highlights the thorough requirements to become the auditor and their reward and recognition as internal auditor either full time or part time auditor. The procedure to conduct internal audit has to include method to determine the risk and performance related to audit criteria to provide value added finding. The procedure should include method to deal with the audit finding such as recommendation for small group activities projects, improvements techniques and analysis. Secondly, the top management support should include performance evaluation of internal audit and provide resources, reward and recognition. Finally method to determine the effectiveness of audit and type of reward and recognition should be determined by organization.

## 5. Conclusions

Management system internal audit is one of the approaches that is useful to determine the improvement opportunities for organization. This study provided the list of issues faced by both the auditor and auditee with the degree of agreement of each issue. The main issues determined from the surveys are: 1) Time consuming; 2) No rewards and recognition for the auditor; 3) No value added to audit findings. The issues can be minimized through effective implementation of internal audit. This study provided and prioritized the contribution factors for effective audit as followed: 1) Effective audit planning and procedure; 2) Top Management support and 3) Evaluation and reward for effectiveness finding. Further action based research is recommended in application of the recommendations for internal audit improvements

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## **Biography**

**Edly F. Ramly** is a Certification Director for EFR Certification. He is renowned coach, auditor, consultant and trainer. With his excellent technical expert and interpersonal skills, he has conducted various high impact trainings and workshop in the area of operation management, industrial engineering, management system including quality, environment and occupational health and safety, workplace improvement, variation and waste reduction, and practical problem solving techniques including statistical tools. Apart from being trained as Lead Auditor in various management system, he is also qualified auditor for Automotive Industry ISO/TS 16949. During his service with Pera Neville Clarke, he is also tutor for QMS lead auditor course. His industrial experience was in the automotive industry. During his stayed with the TRW Automotive, he was tasked with the responsibility of promoting and implementing Lean and Six-Sigma within the Organization. Due to his extensive exposure in Lean and Six-Sigma Management System, he was invited by Malaysia Productivity Corporation (MPC) and Asia Productivity Organization (APO) to conduct public training in the area of Six-Sigma implementation and Lean Implementation. In 2014, he been awarded as one of Malaysia Productivity Specialist by Malaysia Ministry of International Trade and Industry.

**Hood Atan** is a full time project consultant and qualified auditor in the fields of Quality, Health & Safety and Environmental Management system. Mr. Hood Atan holds a Bachelor of Engineering in Mechanical (Industrial) degree and a Master in Engineering (Industrial Engineering) degree from Universiti Teknologi Malaysia. Having worked as a Quality Engineer, Quality Manager, Quality and Environmental Management Representative for numerous years from bottom, middle and to top management. His industrial experience was in the manufacturing industry. During his stayed with the TRW Automotive, he was tasked with the responsibility of promoting and implementing VDA 6.3, QS-9000, ISO TS 16949, ISO14001, ISO 13485, ISO50001, OSHAS 18001 management system and Lean Six Sigma initiatives within the organization. Besides, he also responsible for supplier audit either local or oversea such as Thailand, Singapore, Vietnam, Indonesia, China and India. With his more than 16 years of working experience in the management system standard, he has conducted various trainings and workshop in the area of workplace improvement, QS-9000, ISO/TS 16949 standard, variation and waste reduction, and practical problem solving techniques including statistical tools.

**Mohd Soffian** graduated from Universiti Malaysia Sabah (UMS) in Bachelor of Food Science & Nutrition with Honors. At the same time, he also holds an Executive Diploma in Occupational Safety & Health. He is a certified trainer and assessor by various agencies such as Ministry of Health Malaysia, Human Resource Development Fund Malaysia, American Heart Association, Rescue Medical International, Vocational Education & Training Australia, Australian Institute of Management & other related agencies in the field of occupational health & safety, food hygiene & safety and human development. He is also a certified lead auditor by IRCA & RABQSA for various management systems such as food safety, quality, environment and occupational health & safety. His research on hypertension has been chosen as one of the best undergraduate research & being awarded the NSM Undergraduate Award by Nutrition Society Malaysia in year 2005. He has more than 13 years of experience, with locally and internationally exposure.