Auditing for Continual Improvement: A process for adding value

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Abstract:
Organizations are seeking deliverables from their audit program beyond verification of compliance. This paper is about basic techniques that auditors can use to assess and promote continual improvement.

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Auditing for continual improvement is needed for organizations to remain competitive. When auditing for continual improvement, auditors can verify that there is continual improvement and can provide data that could result in other organizational improvements. This is one way that the audit program can add value to the organization.

Continual improvement is needed because no matter how mature the system, the environment within and external to the organization is constantly changing. The 'If it ain't broke, don't fix it" mentality is not good enough to survive in a global economy. Organizations can become overconfident when they have a successful track record and later wonder why they failed. Success plants its own seeds of failure. Organizations must be constantly vigilant and be willing to continually improve in order to continue to exist.

A. Continual Improvement
Continual improvement means many things to many people. To audit for continual improvement we need to understand what it is. Dr. Edwards Deming promoted never-ending improvement. One of the elements of TQM (Total Quality Management) is continuous process improvement. Recent standards such as ISO 9001 (Quality management systems – Requirements) and ISO 9004 (Quality management systems – Guidelines for performance improvements) require continual improvement. Six Sigma is a methodology for identification and execution of projects for improvement. Lean manufacturing is about improving processes by eliminating waste and non value-added activities. The idea of continual improvement has been a central theme for organizations for many years. However, most organizations are still struggling to achieve a culture of on-going improvement.

B. Audit Objectives
Continual improvement is very desirable yet hard to achieve, therefore organizations should employ techniques such as auditing to monitor and promote it. The new ISO 19011: 2002, Guidelines for quality and/or environmental management systems auditing, clause 6.2.2 provides two example audit objectives that would be appropriate. The audit objectives are:

- Evaluation of the effectiveness of the management system in meeting its specified objectives.
- Identification of areas for potential improvement of the management system.

Many organizations have established continual improvement as an objective and can be audited against that objective. Standards such as ISO 9001:2000 require continual improvement for organizations to maintain their registration. While collecting audit evidence to verify continual improvement, auditors may also observe areas for potential improvement.

Auditing for continual improvement is going to be different from verification of specified requirements in a standard. Verifying that there is a required procedure, that meetings were held or that records exist, is straight forward.

C. Audit Evidence for Continual Improvement
What kind of audit evidence is needed to verify improvement? Would a record showing that complaints were down last month be good audit evidence? Would a trend chart showing sales have been increasing, be good audit evidence for continual improvement?

No matter how fancy the charts or the amount of analysis, one thing must happen for there to be improvement, change. Change is a very important characteristic that auditors can look for to verify there is improvement. Unless there is change, events will continue to repeat themselves. Unless there is a system or process change, there will be no improvement.

D. Continual Improvement for ISO 9001
Continual improvement required by ISO 9001:2000 is limited to the quality management system (QMS) and does not need to result in economic benefits.

> "Continual improvement is a process of increasing the effectiveness of your organization to fulfill your quality policy and your quality objectives. ISO 9001:2000 requires that you plan and manage the process necessary for continual improvement of your quality management system. ISO 9004:2000 provides information that will be helpful in going beyond ISO 9001:2000 to improving the efficiency of your operations." Accessed 11/12/2002, www.iso.ch/iso/en/iso9000-14000/iso9000/selection use, International Organization for Standardization, Selection and Use, Maintaining the benefits and continual improvements.

Organizations that have a registered QMS are not required to make changes that improve their efficiency by lowering their cost or improving profitability.

To verify continual improvement, auditors can look at the results of data analysis, management review, corrective action and preventive action processes. However, if all

the analysis, correcting and reviewing doesn't result in change of the QMS, then there is no improvement.

An auditor must also verify that after the change, things got better. It is not rational to make changes to make things worse, but it sometimes happens. The organization needs to provide measures to show there was improvement after the change.

E. Continual (Performance) Improvement
The real-world need for continual improvement goes way beyond the limits of ISO 9001:2000. Continual improvement is a process of on-going changes to benefit an organization. The changes improve the organization effectiveness (including efficiency). The continual improvement process can be applied to quality, environmental, business, safety, supplier, and management initiatives.

Auditors can verify that improvement is taking place and existing processes are working effectively (and efficiently), and can make recommendations for improving the system and the organization culture. Auditing for continual improvement is not one thing; it is four things. To add value, the audit program can:
>   1. Verify change is taking place and there are benefits
>   2. Verify the rules are being followed and identify waste, risk and way to improve
>   3. Benchmark existing systems to higher level performance standards or best practices
>   4. Gauge how the organization matches up to the quality management principles

Auditing conventions can be used in many ways to benefit the organization. Auditing may be viewed as one of management's strategies for ensuring that there is improvement and it is on-going.

E. 1. Audit to Verify Improvement
To test for improvement we can use the PDCA cycle, only backwards as the ACDP (analyze-change-do-prosper) improvement cycle.

The ACDP (Analyze-Change-Do-Prosper) Process Technique:
1. Analyze: Analyze and evaluate data using chart techniques, comparisons, spreadsheets, tabulations, pictures, statistical techniques and so forth.
2. Change: Identify and justify changes to methods, application techniques, acceptance criteria, equipment, materials, technology and personnel.
3. Do: Implement change.
4. Prosper: Monitor improvement to show benefits in effectiveness (cost, opportunity and risk).

For improvement to take place, the data must be analyzed for trends and weaknesses. This is the analyze step of the ACDP improvement cycle. Next, the solution must represent a change in the system. This is the change part of the improvement test cycle. The do step of the cycle is the implementation of the change. Auditors can verify that changes actually took place by reviewing documents and interviewing area personnel.

On-going improvement should enable the organization to prosper. The assessment and determination of the benefits to the organization represent the prosper (or profit) step of the improvement test cycle.

For this continual improvement audit, the auditor needs only to verify the actions of the auditee. Audits with this objective should be routine.

E. 2. Audit to Improve Process Performance
First, auditors need to determine if there are rules and if people are following the rules. Auditors should assess the effectiveness and efficiency of the process. Auditors also should look for the symptoms of ineffectiveness and inefficiency such as waste or redundancy. Finally, auditors can point out opportunities for improvement or weak links in the process.

Common poor performance indicators are: Redoing (repeating, not right the first time), Waiting (delaying, on hold, backlog), Rejecting (wasting, scrap), Distance (lengthy travel between steps) and Bypassing (work-around, non value-added,). Auditors should examine questionable performance indicators (the symptoms) to identify areas that may be improved.

Audits to improve process performance are not limited by the type of process. It can be stamping, running, fixing, securing, storing, reviewing, or correcting. It can be related to safety, quality, the environment, accounting, or general business. Auditors will want to thoroughly examine all known or suspect weak areas of the system. Process owners should be encouraged to conduct self audits to identify waste and non value-added activities.

For this type of continual improvement audit, auditors are expected to verify the process steps and identify problem areas, weak links, and opportunities for improvement. Auditors will need knowledge of accounting practices and quality practices such as those found in the certified quality manager body of knowledge.

E. 3. Audit to Benchmark Against Higher Level Criteria
This is another type of audit to promote continual improvement and will open up the organization to new ideas and new methodologies that could benefit the organization. The auditor should identify gaps compared to the chosen criteria (For example: ISO 9004:2000 or Quality Award). The audit team should also make recommendations that can be considered by management for implementation. Self assessment guidelines are provided by ISO 9004:2000, Quality management systems – Guidelines for performance improvements, Annex A, Guidelines for self-assessment.

Auditors conducting this type of audit should be knowledgeable in the criteria being used. Benchmarking should be conducted every three years or so.

E. 4. Audit to Assess Perception of the Application of the Quality Management Principles

Is management walking the walk and talking the talk? It will be very valuable to compare the perception of management, 1st level supervisors and labor. Using the eight quality management principles, we can ask employees to rate their organization as 5 – Strongly Agree to 1 – Strongly Disagree for the following:

- Management has created an environment where you can become fully involved in achievement of objectives.
- People's abilities are being used to the fullest extent to benefit the organization.
- There is good leadership and direction from the top.
- There is a strong customer focus in all aspects of the operation.
- Continual improvement and preventive management is practiced by the organization.

For top management, the knowledge of how management is perceived will be valuable input for organizational planning. Organizations can also conduct a self assessment to match programs with the application of the quality management principles.

F. Adding Value
The audit program can add value to the organization by auditing for continual improvement.   Keeping the organization on the track of continual improvement could be the most valuable audit service the audit program can ever deliver.

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