

Audit Effectiveness - *Assuring Customer Satisfaction*

By Diane Clegg, Simon Lang and Jeff Fiebrich
Diane.Clegg@Freescale.com, Slang@Freescale.com, J.Fiebrich@Freescale.com
Freescale Semiconductor, Austin, Texas 78602

ABSTRACT

Whether a company is large or small, audits are important factors in continually improving business practices. Ultimately, improved business practices will assure customer satisfaction and drive project effectiveness. Audits can be used to identify best practices to be shared across the company as well as identify areas needing improvement. Good planning is imperative to a successful audit. Audit planning requires not only creating a schedule, but ensuring the appropriate people are available to be audited. Preparation is the key element in planning an effective and efficient audit. This will include scheduling, recruiting the team, training and kick-off meetings. Then determine the right skill set you will need to fill the auditor role. This role will be critical to preparing auditees, proper reporting, avoiding audit challenges and, if necessary, managing 3rd party audits. No matter what combination of audits is right for your organization, planning and monitoring of the system is key. Drive for an understanding of the value your overall audit program brings to your organization and your customers. Align your Key Process Indicators with your company's strategies, track them, change things when necessary and, above all, maintain the integrity of your audit program.

Biography

Jeff Fiebrich is a Software Quality Manager for Freescale Semiconductor Inc. He is a member of the American Society for Quality (ASQ) and has received ASQ certification in Quality Auditing and Software Quality Engineering, and is a RABQSA International Certified Lead Auditor. A graduate of Texas State University with a degree in Computer Science and Mathematics, he served on the University of Texas, Software Quality Institute subcommittee in 2003 - 2004. He has addressed national and international audiences on topics from software development to process modeling. Jeff is the co-author of the book, 'Collaborative Process Improvement', Wiley-IEEE Press, 2007.

Simon Lang is a Software Quality Manager for Freescale Semiconductor. Simon has 10+ years of experience in the High-Tech industry. He has most recently lead various improvement efforts for one of the software organizations using CMMI methodologies and Lean tools. Simon has degrees in business management and is a certified internal auditor, Lean facilitator as well as a Six Sigma green belt.

Diane Clegg is a Quality Systems Engineer for Freescale Semiconductor, Inc. She is an America Society of Quality certified Internal Quality Management System (QMS) Auditor. With fifteen years of experience in the semiconductor industry, Diane served as the Project Manager for the Freescale Document Management System (DMS) project implemented via SAP.

1. Introduction

Whether a company is large or small, audits continually improve business practices. Audits can be used to identify best practices to be shared across the company as well as identify areas needing improvement. Everyone should know by now that audits are performed ultimately to assure the customer is getting what they want, when they want it, and with an acceptable quality.

Your initial audit will always provide you with a baseline upon which you can improve going forward. One of the most critical aspects to achieve continuous improvement and get the maximum benefit out of your audits is to document what you do and do what you document. It is difficult to understand a process that you can't fully describe and even harder to improve it. Projects usually are picked to be subject to external audits often get special preparation and do not necessarily reflect every single project in the organization. All processes contribute to the final result, however, so management needs to be aware of the various types of audits available to them and what goal(s) they want to achieve through them.

Ideally, you have different layers of audits within an organization to achieve maximum impact and results. Group internal, peer-review type audits can be very powerful to use in an organization's day-to-day activities. Examples of these reviews include design reviews or software code reviews. Although relatively resource intensive, errors found during these activities should be recorded. They provide important information for various processes, including measuring defect phase containment effectiveness. Another type of audit can be the phase gate audit, which applies to both waterfall and more iterative project development methodologies. Essentially, this reflects back on the consistent institutionalization of your organization's documented processes (or lack thereof). Feedback gathered during phase gate audits is essential and, in turn, provides a baseline for future improvements.

Finally, audits by an independent Quality organization whether it be company internal or an external ISO certification body can be great motivators and rewarding for internal teams. This type of audit typically gets the best organizational exposure and management attention. Depending on the goal of these audits, they are a great way to show the level of commitment to quality and continuous improvement to your internal and external stakeholders – your customers.

2. Audit Planning

Good planning is imperative to a successful audit. Audit planning requires not only creating a schedule, but ensuring the appropriate people are available to be audited. Preparation is the key element in planning an effective and efficient audit.

Planning for an audit begins with selecting the business process(es) to be audited. This could be determined by an external standard to which the company is required to comply or processes deemed by management needing improvement.

Once the processes have been selected, the appropriate auditors and auditees are determined. Typically, both would be determined by someone having expertise in the area being audited (e.g., someone with a software background will be better at auditing software processes than an auditor without such expertise). Logistics include timing / availability of the auditee and location for the audit itself. Time management is important to ensure that the audit is effective and efficient.

Once the auditors and auditees have been determined and logistics completed, a kick-off meeting is held to introduce the group to the audit process as well as set expectations. This kick-off meeting with outline

the purpose of the audit, the areas to be audited, the project(s) involved and an explanation of what will be done with the results. The team will also be made aware of the potential impact that business processes have on the customer.

3. Auditor's Role

Process auditing starts by looking at how the processes function and how they link elements. Many processes are cross-functional or involve several departments. The auditor should use Plan Do Check Act (PDCA) to identify the parts of the standard necessary for the function of each process and should build the audit around open-ended questions, which reveal more about each process.

The interviews should start with the process owner - the person who can provide the best information about the operation of the process. Other key personnel should be interviewed to get a complete picture. If questions arise, start the discussion with the appropriate clauses of the standard. Always refer to the exact wording, and clarify if necessary.

The auditor should obtain objective evidence by performing a walkthrough of steps of each process. When a finding is identified, the auditor should sit down with the process owner and other implementers to describe the finding in relationship to the wording of the standard.

It is the auditors' responsibility to ensure that the auditee is well-trained and prepared. This is especially true for external or third-party audits. Coaching by the auditor improves upon the efficiency of the audit and is a good learning tool for all. This coaching enables the auditor to better understand the process for which they'll be auditing, and it enables the auditee to understand the requirements to which they must adhere. Be careful, however, not to "over coach" – an auditee should feel comfortable giving an honest accounting of the processes as they understand how they are intended to work, not a recitation of what they think the auditor is looking for.

External audits require a signed contract between the external party performing the audit (e.g., Lloyd's Register Quality Assurance – LRQA) and the company being audited. These audits incur a cost of which selected auditors may be required to manage. Invoice tracking is an important role to ensure that payments are being made in compliance with the contract.

4. Verification Audits

Verification audits are part of what Joseph Juran called the "little q" (quality control, tactical tools) as opposed to the "big Q" (quality assurance or managements systems). System thinking is important, but you can't lose sight of the everyday tools necessary to ensure processes are controlled and risks are minimized.

Supply chain management, outsourcing, process or product complexity and sophistication, certified suppliers and operators, global economies and risk of field failures have all increased the need for ongoing verification. In addition, verifications audits need to be performed when there are routine changes in suppliers, equipment, process settings, methods, requirements or personnel. (J.P. Russell, November 2009)

You need to understand the process and product or service you are going to audit. Reviewing the procedure, specifications and records is a good starting point. If there is no procedure, you may need to ask the auditee to provide a description of the processes. Talk to people to get the information you need.

There are several tools available that can help you understand the process. They include:

- ◇ Process flow diagrams, flowcharts or process mapping
- ◇ Cause and effect, turtle and tree diagrams
- ◇ Process Effectiveness Reports
- ◇ Failure mode effects analysis
- ◇ Training documents
- ◇ Inspection checklist
- ◇ Procedures
- ◇ Bill of materials, quantities and specifications

Find out about process or product history, including:

- ◇ Nonconformance reports and trend analysis
- ◇ Internal and field failures
- ◇ Corrective actions
- ◇ Process or product changes, date and nature of changes
- ◇ Operator or technician changes
- ◇ Revalidation history
- ◇ Customer complaints

Verification audits are part of a robust risk-management process to mitigate potential unacceptable losses. The frequency of verification audits depends on degree of risk and performance history.

Processes and the environments in which they take place are constantly changing. Verification audits are key tools to ensure sustainability of the management system. Results come from checking, not expecting. (J.P. Russel, 2003)

5. Third-Party Audits

There is a subtle dance organizations choreograph and perform in the weeks prior to a scheduled third-party audit. Besides ensuring the organization puts its best foot forward, many of the machinations are intended to ensure failure is avoided.

But, if we stop and contemplate why we think of audit results as pass or fail, we may become more aware of how our mentality affects the way we behave during an audit and how that mind-set influences others.

Part of preparing for the third-party auditor is blitzing the organization with mini-audits. These unscheduled walkthroughs of office and manufacturing areas with eyes peeled are intended to identify anything out of the ordinary, such as untagged nonconforming material, unlabeled or past-due inspection and measuring equipment, general housekeeping, obsolete or uncontrolled documents, and outdated communication boards with performance data.

As soon as a discrepancy is observed, it is brought to the attention of someone with the appropriate level of authority in the area targeted for correction. Then, additional blitzes are performed with a heightened sense of urgency and mission, focusing on the observed problem.

Naturally, all identified discrepancies are fixed right away. There is a sense that things just got a little bit better, and we become a little less vulnerable to the auditor's sword . . . er, pen.

The obvious problem is that the system did not get better. The discrepancies observed were symptomatic of deficiencies in the systems' processes that continue to lurk beneath the veneer of calm assuredness that all is well. This only promises the problems will return unless causes are identified and effectively resolved with robust corrective actions.

6. Appreciative Audits

Appreciative inquiry is a discovery method that includes "the art and practice of asking questions that strengthen a system's capacity to apprehend, anticipate, and heighten positive potential."

An appreciative audit helps reveal and enhance what's correct or discard what's not. This creates a value-added experience that encourages the workforce by building solutions based on the fundamental truth that in every company, department or project, something works.

The name, appreciative audit, stems from a hybrid of "internal audit" and "appreciative inquiry." The appreciative internal quality audit has some fundamental differences from traditional internal quality audits. It evolved through a process of collaboration where some of the following critical key questions were answered:

- ◇ What if revealing system effectiveness and best practices was just as likely as finding non-conformance?
- ◇ What if the act of asking audit questions began a process of change for the better?
- ◇ What if audit results became a key input to a CEO's strategic plan?
- ◇ What if audits become something to look forward to?
- ◇ What if the events outlined in the previous questions could be achieved without sacrificing conformance to international and industry standards?

Appreciative audits are an ideal internal audit alternative for organizations that would like to carry forward what they are doing best and encourage improvement in the areas they want to do better. Appreciative audits introduce an innovative way to revive a tired internal audit process and jumpstart the improvement cycle, without sacrificing conformance to required standards. (Jon Morris, October 2008)

7. Strategic Alignment

One potential benefit of a mature audit program is its ability to support the execution of the organization's strategy. In their groundbreaking book *The Balanced Scorecard*, Robert Kaplan and David Norton provided a model for measuring the alignment among an organization's key internal, financial, support and customer-oriented processes and its vision, mission and strategy.

In their later book, *Strategy Maps - Converting Intangible Assets into Tangible Outcomes*, they cite research that indicates 70 to 90% of organizations fail to realize success from their strategies. In most instances, this failure is not due to poor strategies, but rather from failure to properly deploy and execute the strategy.

An internal audit program, coupled with a properly deployed strategic plan and a well-designed system of indicators, can help an organization execute its strategy and achieve its performance goals. This program will include annual audits, quality management system audits and auditing for strategic alignment. Annual

audits typically focus on very high-level processes (macro-processes) and systems, while quality management system audits typically focus on process and associated sub-processes. Annual audits provide an overall indicator of the performance and gaps in the organizations. Quality management system audits drill down to the processes that drive overall performance, providing specific information needed to close the gaps noted in an annual audit.

Unfortunately, auditing for strategic alignment is not always easy to do. First, the strategic elements must already be in place. These elements include a properly formulated strategic plan, a robust scorecard of strategic indicators, and strategy maps or a process architecture that link the strategic goals and initiatives to the internal processes that support them.

In addition, the organization must have senior managers who recognize the potential of the audit program as a deployment aid and support audits of strategic alignment and performance. Finally, the organization must also have experienced auditors with the knowledge, perspective and credibility needed to successfully evaluate and report on areas of strategic alignment (or misalignment) within the organization's systems and processes.

Internal auditing for strategic alignment and execution requires that the auditor understand the organization's desired strategy and how each process fits into this strategy.

It is fair to say that not all processes are created equal, especially when considering their contributions to the success or failure of the strategic plan. Auditors must be shown or be able to develop the connections between the strategy and the processes being evaluated. Auditors will then be in a position to determine the degree of alignment between the strategy and the process inputs, resources, metrics and performance in support of the strategic goals. To accomplish this, internal auditors should be provided additional training that includes:

- ◇ The organization's vision, mission and values.
- ◇ The organization's overall competitive strategy (for example, low-cost provider, customer intimacy or product leader).
- ◇ The current strategic plan and initiatives needed to execute the chosen strategy.
- ◇ The balanced scorecard or other dashboard of high-level strategic indicators used by the organization to measure strategic performance.
- ◇ The organization's system for establishing process metrics and reporting process performance.

These topics help provide the business perspective the auditors will need when evaluating what is most important and where they should allocate their time during the evaluation.

In addition, auditors should receive training in tracing the links from the high-level strategic indicators to the lower-level business processes that drive them. This training and experience can be provided in-house.

8. Audit Program Value

Properly directed, internal audit program resources can help an organization stay focused and uncover new improvement opportunities in the context of the company's overall strategy and focus on the customer and customer satisfaction.

Unfortunately, the effectiveness of many audit programs is limited to counting findings or other simplistic measures. Effective audit programs, however, should provide insight and support the organization's

objectives. For some organizations this can be a challenge since they are not sure how to gauge the effectiveness of their audit program.

At first glance, gauging the effectiveness of your internal audit program may seem easy. If you have accomplished your objectives, the audit program is effective. But as you start to list the organization, department and audit program's objectives, things start to get fuzzy. What methods will you use, and what measures do you need to monitor? How will you evaluate the impact to your customers?

After a few minutes of scratching your head, you may be tempted to go back to counting audits conducted, nonconformities issued and closed corrective actions as your key performance indicators (KPIs) - but please resist.

Effectiveness of the audit program should be of interest to audit managers and auditor team members; managers, because they should be making the right decisions to continually improve the internal audit function and auditors because they will be asked for their input and agreement on the performance parameters by which they will be judged.

As you can see, the number of audits conducted or corrective actions requests closed are not adequate KPIs of the effectiveness of the internal audit program. Counting audits addresses only the process and not the outcome (product).

Audit program performance indicators should be based on objectives that reflect the audit program mission and organizational objectives and goals. The organizational objectives and goals define the big picture of where you want to be one to five years from now and should be well-understood and prioritized.

Not all objectives are equally important to the organization or audit program. Objectives and goals may be lumped into three groupings:

- ◇ Group 1 - critical for the organization to operate. Top management wants to know if the organization adheres to all applicable standards to ensure critical licenses and certifications will be retained.
- ◇ Group 2 - Necessary for day-to-day management.
- ◇ Group 3 - Required for advancement and growth.

The group numbers are not necessarily the order of importance of the individual organization's objective or goal.

Once you know the objectives, you, as the manager, or your management team can develop strategies to achieve the audit program objectives. The strategies will be based on the type of organization, the organizational culture and resources. Some of the strategies may be simply to formalize what you are already doing.

An objective may be to maintain continuous compliance using fewer resources, with audit program strategies or tactics that could include establishing a network of audit advisors for areas needing assistance to comply based on past results or establishing and implementing an e-audit program.

9. Summary

By applying intelligence to the audit process, which will include building in the audit process to the overall project and process planning activities can result in big gains for the effectiveness of internal processes. This effectiveness will, in turn, display itself in bottom-line results because customer satisfaction (be they internal, or external) will be increased.

To do this, remember to begin your audit management by

- Planning it - this will include scheduling, recruiting the team, training and kick-off meeting management.
- Determine the right skill set you will need to fill the auditor role. This role will be critical to preparing auditees, proper reporting, avoiding audit challenges and, if necessary, managing 3rd party audits.

Every process should have effectiveness measures and the audit process should be no exception. Be sure to understand how your audits are strategically aligned to the business and figure out what you need to know about non-conformities and the overall audit program that will allow you track what is important.

Consider also the types of audits you will conduct and ensure your selected auditor is the right person for the job.

- Verification audits to ensure quality control and tactical practices will require that the auditor understands the product or service that is being audited
- Third-party audits will need to be choreographed carefully prior to the actual audit event
- Appreciative inquiry will require an understanding of how to manage a less-traditional, more creative type of internal audit.

Drive for an understanding of the value your overall audit program brings to your organization and your customers.

Then tell everyone about it. Pass it on, talk it up and make it sing. Perception is real – help ensure that audits are perceived as essential to quality management systems that *work*.

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