EHS AUDIT PERFORMANCE METRICS

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The value of an organization's environmental, health and safety (EHS) audit program might seem obvious, such as the avoidance of regulatory fines or operational disruptions due to EHS incidents, or protecting employee health and safety in the workplace. However, according to an IIA Environmental, Health & Safety Audit Center (EHSAC) survey, metrics related to the effectiveness of EHS auditing are rarely reported to stakeholders, even though survey respondents acknowledge that such metrics are valuable.

Whether internal audit functions and EHS audit functions are working together closely or autonomously, both groups can enhance and protect the value the EHS audit program provides by establishing and reporting on EHS audit performance metrics.

Audit Focus

Mission of Internal Audit

To enhance and protect organizational value by providing risk-based and objective assurance, advice and insight.

IIA Standard 1230: Continuing Professional Development

Internal auditors must enhance their knowledge, skills, and other competencies through continuing professional development.

EHS Audit Performance Metrics

In 2017, the EHSAC deployed a survey to members to gather information and opinions on EHS performance metrics. The survey collected information about what types of metrics are compiled and reported, and the value of these metrics in conveying the performance, effectiveness, or efficiency of the EHS auditing program. Survey respondents were presented with seven groups of metrics divided into three categories:

SUMMARY

Learn how to effectively establish and report EHS audit performance metrics, with special consideration to the balance between productivity metrics and effectiveness metrics. Find out which metrics EHS auditors say they currently compile and report — and which they value highly and should be reporting — according to EHSAC survey results.

Productivity Metrics

- The number of audits performed.
- The number of audits performed by audit scope.

Effectiveness Metrics

- Audit findings and recommendations.
- Post-audit actions.
- Program efficiency and outcomes.
- Facility self-assessments compared to EHS audits of the facility.

Management Metrics

Allocation of effort, staffing, and qualifications.

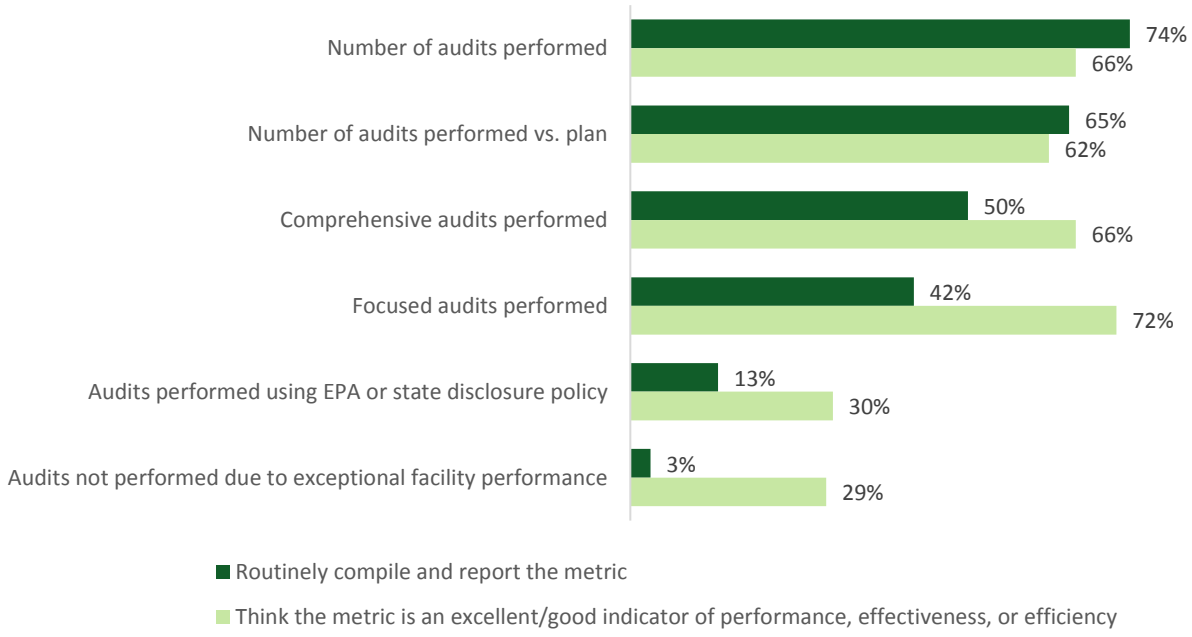
The survey indicated that productivity metrics are routinely reported more broadly than effectiveness and management metrics. However, many respondents indicated that effectiveness and management metrics could be excellent or good indicators of performance, effectiveness, or efficiency. The gap between incidence of reporting and perceived value of individual metrics can be quite large, as the exhibits in this report show. This suggests that EHS and internal auditors could take a more strategic approach to how EHS audit programs contribute to organizational success. In order to report some of the metrics that demonstrate the greatest values, EHS auditors may need to develop new proficiencies.

Productivity Metrics — Number of Audits Performed

The majority of respondents say they routinely compile and report the total number of audits performed (74 percent) or number of audits performed vs. plan (65 percent). At the same time, 50 percent or fewer routinely compile and report additional metrics, such as the number of comprehensive or focused audits performed.

Only 3 percent of respondents compile and report the number of audits *not* performed due to exceptional facility performance, but 28 percent think the metric is an excellent/good indicator of performance, effectiveness, or efficiency.

Exhibit 1: Productivity Metrics — Number of Audits Performed



Productivity Metrics — Number of Audits Performed by Scope

More than half of respondents routinely compile and report the number of audits focused on regulatory compliance or conformance with company policies. However, only a third or fewer routinely compile and report on other productivity metrics.

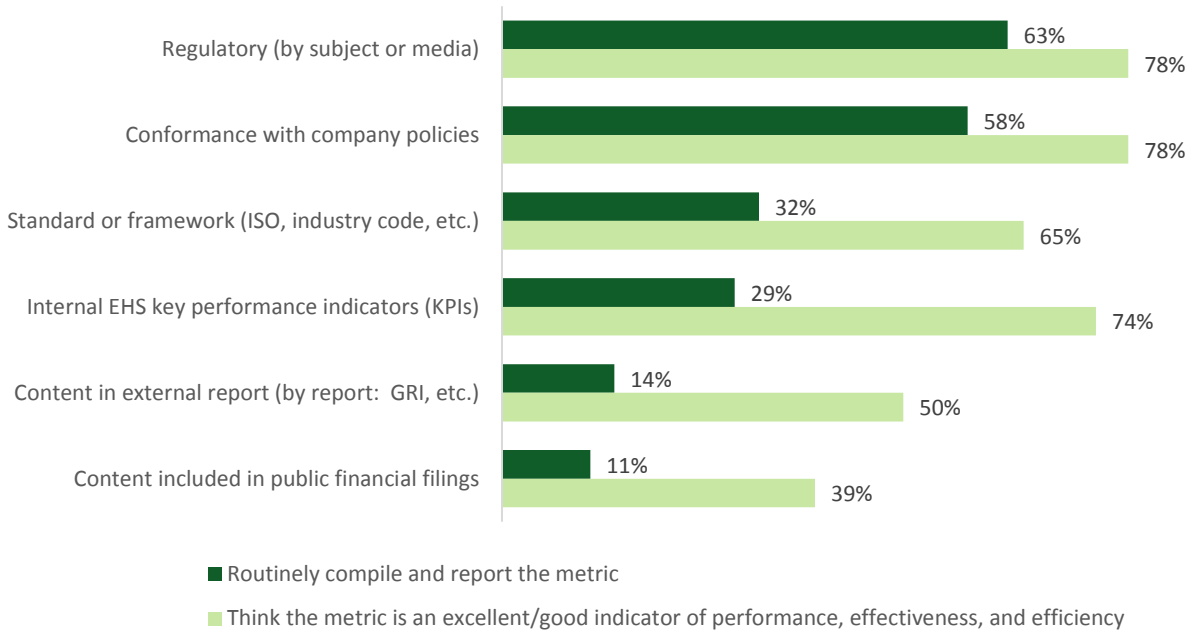
Going forward, more auditors may be inclined to compile and report on the number of audits focused on a framework/standard due to expanded stakeholder interest in environmental, social, and governance (ESG) issues and increasing risks associated with incomplete, inaccurate, inconsistent, or unsupported information. The Global Reporting Initiative (GRI) provides a standard framework for reporting environmental and social (including safety) performance. The Sustainability Accounting Standards Board (SASB) has drawn attention to ESG disclosures in financial filings (Forms 10-K) by applying existing securities law and guidance to ESG issues. As internal audit increases assurance over second line of defense activities and nonfinancial reporting, it is reasonable that assurance over all EHS information publicly disclosed by the organization might be included.

Audit Focus

For more information, see:

- The IIA Practice Guide "Internal Audit and the Second Line of Defense."
- The IIA Position Paper "The Three Lines of Defense in Effective Risk Management and Control."

Exhibit 2: Productivity Metrics — Number of Audits Performed by Scope



Effectiveness Metrics — Audit Findings and Recommendations

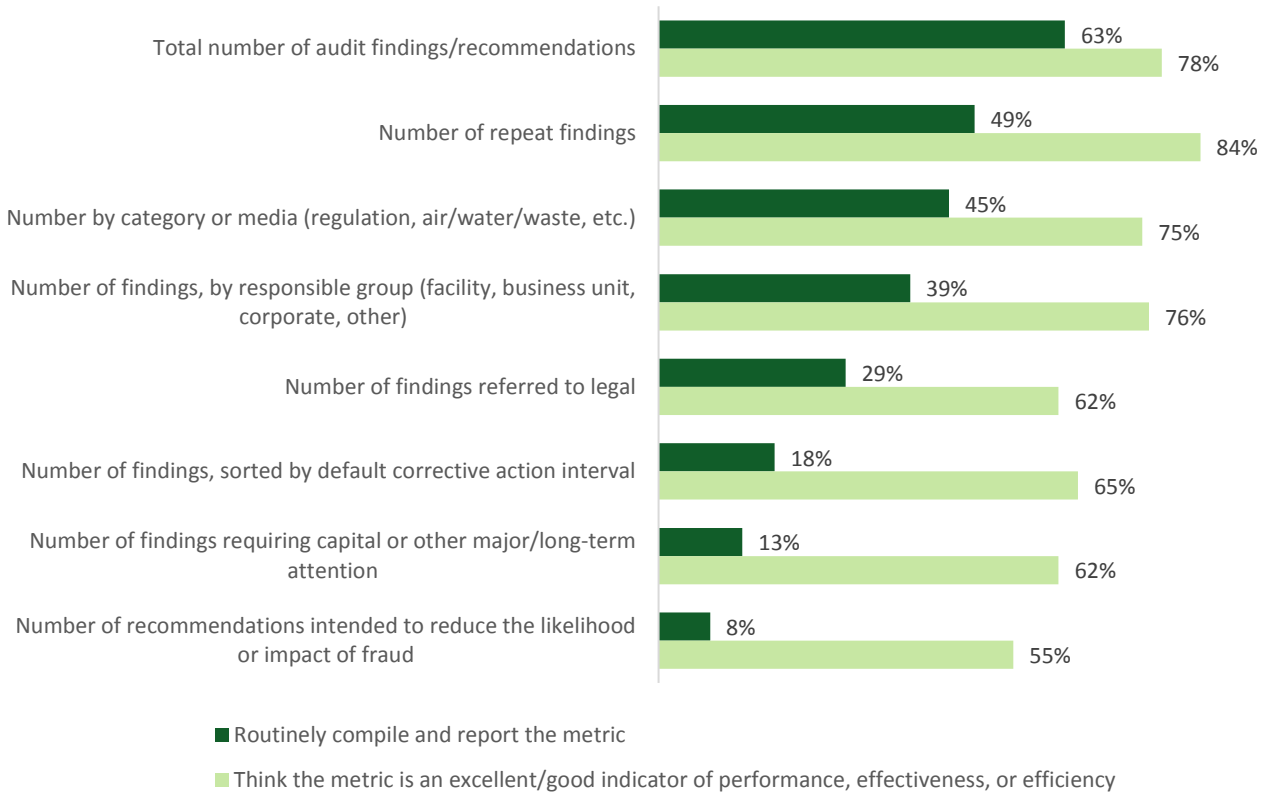
Metrics that demonstrate the effectiveness of audit findings and recommendations can inform management and the board about the impact of the EHS program on the organization. Although the majority of respondents consistently perceive value in reporting these metrics, the only metric routinely reported by more than half of respondents is the total number of audit findings/recommendations.

Recommendations related to fraud show the largest gap between actual practice and perceived value. Eight percent routinely compile and report this metric compared to 55 percent who think the metric is an excellent or good indicator of value. The Sarbanes-Oxley Act and the scandals that led to it are stark reminders of the impact that fraud can have on an organization. While fraud is commonly thought of in terms of accounting and financial reporting, it can also arise in compliance, operations, and nonfinancial reporting — where EHS plays a significant role. EHS auditors may need additional training and resources to identify risks and conduct testing related to fraud.

Audit Focus

IIA Standard 1210.A2: Internal auditors must have sufficient knowledge to evaluate the risk of fraud and the manner in which it is managed by the organization, but are not expected to have the expertise of a person whose primary responsibility is detecting and investigating fraud.

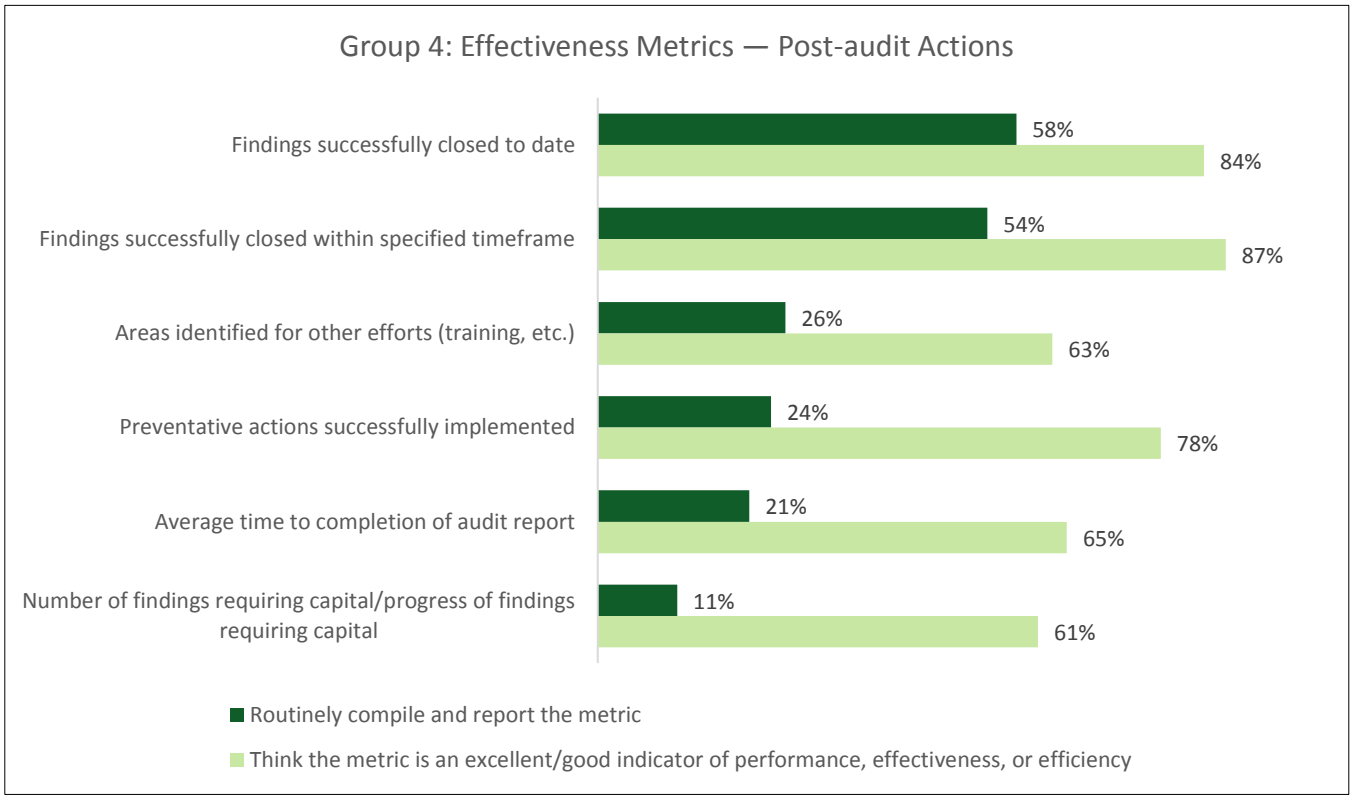
Exhibit 3: Effectiveness Metrics — Audit Findings and Recommendations



Effectiveness Metrics — Post-audit Actions

Auditor work does not necessarily stop after the report is written. IIA Standard 2500 requires the chief audit executive (CAE) to establish and maintain a system to monitor the disposition of results communicated to management. EHS auditors measure performance in kind, with 58 percent indicating they routinely measure findings successfully closed to date. Even more — 84 percent — acknowledge that it would be useful.

For measures of preventative actions successfully implemented, the difference between actual practice and perceived value is particularly striking — 24 percent compared to 78 percent. Preventative measures include changes in systems and controls to prevent failures, which can reduce the occurrence of EHS problems such as spills, toxic releases, workplace injuries, and instances of noncompliance. Other benefits can include greater operational continuity, reduced costs for insurance, and reduced costs for backup coverage for production. These are compelling ways to align EHS audit with the Mission of Internal Audit and to demonstrate value to the organization.

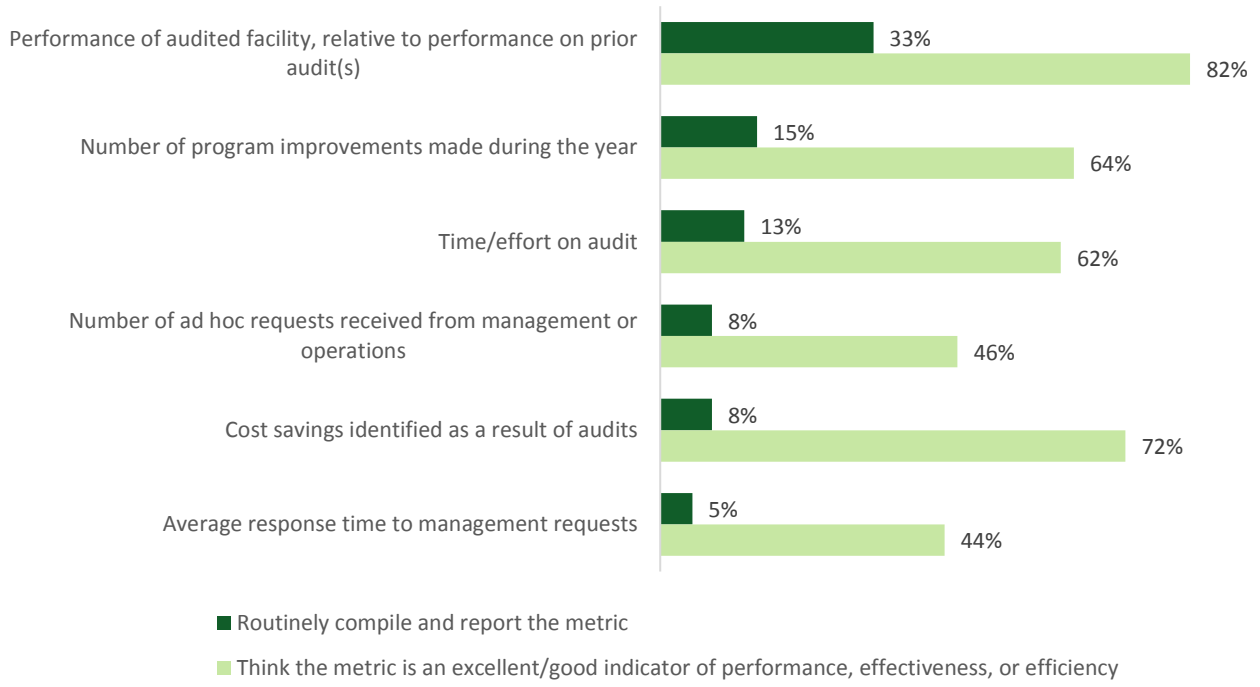


Effectiveness Metrics — Program Outcomes and Efficiency

A clear majority of respondents perceive value in reporting facility performance on an audit compared to the prior audit (82 percent), but only 33 percent routinely report this metric. Other metrics related to program outcomes and efficiency are even less likely to be compiled and reported in practice (15 percent or lower).

Compiling and reporting on cost savings is rare (only 8 percent of respondents), but 72 percent perceive this metric to have excellent/good perceived value. Because EHS auditors gain an in-depth knowledge of operations, they can make insightful recommendations that can lead to cost savings. For example, audit recommendations to reduce waste generation also could decrease waste disposal costs — and the cost of buying the raw material that became wastes. In addition, audit recommendations to reduce greenhouse gas emissions may also reduce energy use — and the costs for utilities or fuel. Companies with robust sustainability programs have adopted cost accounting practices that track cost savings to demonstrate the value of those programs. Some have tried to measure environmental and social benefits as well.

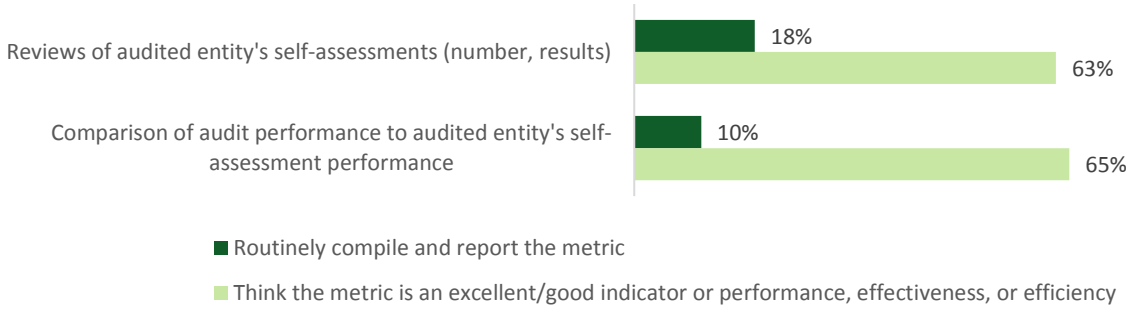
Exhibit 5: Effectiveness Metrics — Program Outcomes and Efficiency



Effectiveness Metrics —Facility Self-Assessments Compared to EHS Audits of the Facility

Leading practice EHS audit programs strive to enable core business functions to achieve compliance on an ongoing basis — and to recognize (on their own) gaps in compliance and how to correct them. EHS auditors could assess progress in this area by comparing a facility's self-assessments to EHS facility audit results. One in 10 survey respondents say they routinely compile and report this metric, but many more indicate that it would be valuable (65 percent). The benefit of reporting this metric is that it can help to release EHS auditors from auditing facilities that are effectively self-monitoring, which then allows EHS auditors to refocus efforts on other EHS audit risks and emerging issues.

Exhibit 6: Effectiveness Metrics — Facility Self-assessments Compared to EHS Audits of the Facility



Management Metrics — Allocation of Effort, Staffing, and Qualifications

Overall, fewer respondents compile and report on management metrics than any other type of metric surveyed. However, the expectation for effective resource management is only likely to intensify. Many CAEs report these metrics to the board as part of their performance measures. The internal audit activity may consider EHS management metrics in an effort to provide assurance over second line of defense functions, including EHS auditing.

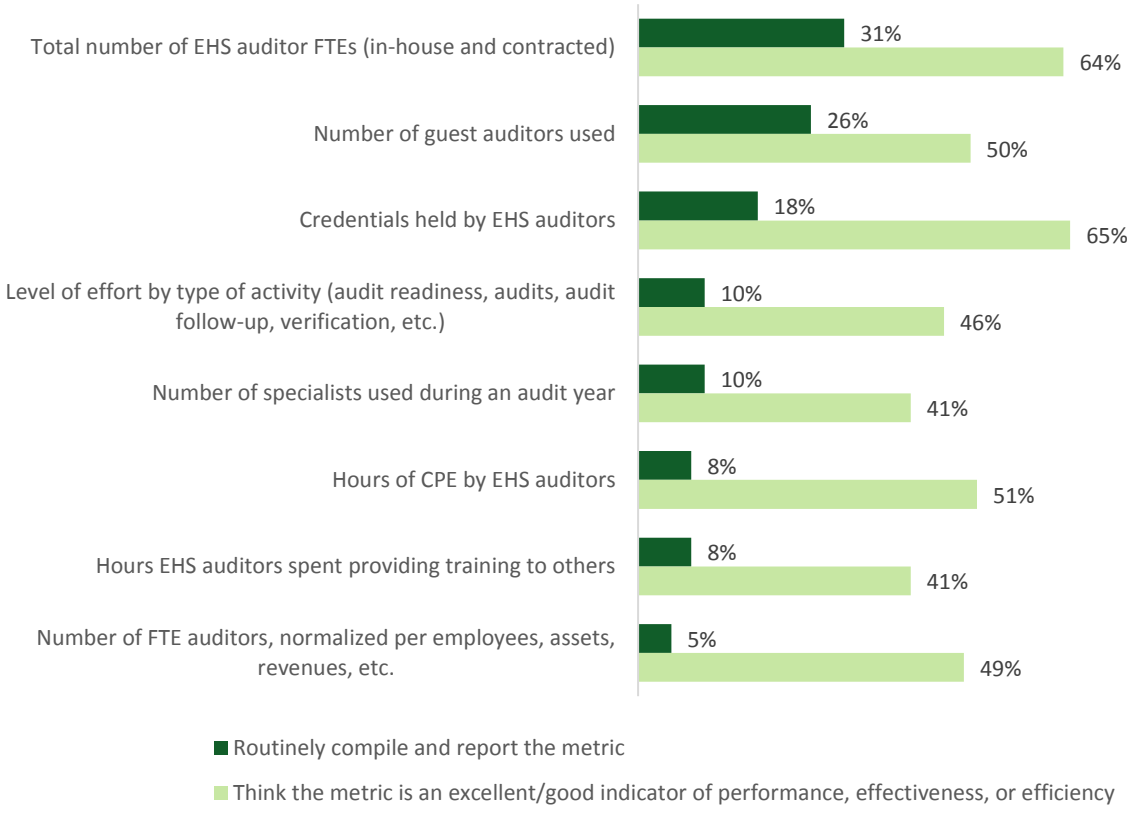
Nearly one-third of respondents (31 percent) compile and report on EHS full-time equivalents (FTEs), but nearly two-thirds say the metric would be an excellent/good indicator of performance. About two-thirds of respondents say the credentials held by EHS auditors would be an excellent/good indicator of performance, while far fewer compile and report this metric in practice. This recognition underscores the importance of a variety of credentials, including certifications offered through The IIA.

Audit Focus

IIA Standard 1220.A1: Internal auditors must exercise due professional care by considering the:

- Extent of work needed to achieve the engagement's objectives.
- Relative complexity, materiality, or significance of matters to which assurance procedures are applied.
- Adequacy and effectiveness of governance, risk management, and control processes.
- Probability of significant errors, fraud, or noncompliance.
- Cost of assurance in relation to potential benefits.

Exhibit 7: Management Metrics —Allocation of Effort, Staffing, and Qualifications



Audit Focus

IIA Certifications and Qualifications

- Certified Internal Auditor® (CIA®)
- Certification in Control Self-Assessment® (CCSA®)
- Certification in Risk Management Assurance® (CRMA®)
- Certified Financial Services Auditor® (CFSA®)
- Certified Government Auditing Professional® (CGAP®)
- Qualification in Internal Audit Leadership® (QIAL®)
- Certified Professional Environmental Auditor™ (CPEA™)
- Certified Process Safety Auditor™ (CPSA™)

Conclusion

Multiple drivers are influencing how boards, CAEs, and executive management perceive and manage EHS *risks*. Reporting frameworks from several organizations, such as GRI and SASB, include EHS parameters. The Committee of Sponsoring Organizations (COSO)'s newly revised *Enterprise Risk Management – Integrated Framework* also includes several EHS examples. In addition, The IIA's International Professional Practices Framework includes elements that impact EHS audit as internal audit performs assurance over second line of defense activities. EHS auditors should prepare to compile and report more metrics that demonstrate the effectiveness of their work. If EHS auditing programs do not currently include efforts that enable reporting performance measures that are better-suited to helping their organizations meet its goals and objectives, then the EHS auditing programs should change accordingly.

About the EHS Audit Metrics Survey

The survey was conducted using an online survey tool implemented by The IIA and launched shortly before the January 2017 national meeting of the EHS Audit Exchange, remaining open for 12 weeks. The survey was promoted to a select group of EHS auditing program leaders and leading practitioners, of which approximately forty (40) professionals responded. The sector with the greatest representation was manufacturing, which accounted for almost half of the respondents. Respondents indicated that their primary work responsibilities were related to environmental, health and/or safety (63 percent), internal audit (35 percent), and operations (3 percent). For each metric, respondents were asked two questions:

1. Do you compile this metric for your EHS audit program?

   Response options: 5 = routinely compile and report; 4 = have compiled and reported at least once; 3 = do not report, but info could be obtained; 2 = do not report, info likely not available; 1 = have not reported, could not compile; N/A = does not apply in our situation.

2. If this data were available, do you think it would help convey the performance, effectiveness, or efficiency of the EHS auditing program?

   Response options: 5 = excellent indicator of EHS Auditing Program P/EE (performance, effectiveness, or efficiency); 4 = good indicator of EHS Auditing Program P/EE (performance, effectiveness, or efficiency); 3 = could be useful for certain purposes; 2 = unlikely to be useful indicator; 1 = see no value in this parameter; N/A = does not apply in our situation.

When percentages were calculated for the exhibits, those who chose "N/A" (not applicable) were included in the denominator.

About the Author

Douglas Hileman, CRMA, CPEA, FSA, P.E., has 40 years of experience in compliance, operations, auditing, and nonfinancial reporting. He has experienced multiple lines of defense through work with operations and corporate compliance, EHS auditing, internal audit, and external assurance (supporting financial audits and conducting conflict minerals independent private sector audits). He supports clients nationwide and has been involved in professional organizations dedicated to EHS auditing since the 1980s. He is an officer in The IIA–Los Angeles Chapter and has presented at IIA events.

About the Environmental, Health & Safety Audit Center

Established in 2016, the Environmental, Health & Safety Audit Center (the Center) is a specialty offering of The IIA for environmental, health and safety (EHS) auditors. The Center was established to provide EHS auditors with low-cost, high-quality professional development; networking opportunities for knowledge sharing among stakeholders; and ongoing, timely, and relevant reporting on trends, benchmarking, and thought leadership in the audit profession.

About The IIA

Established in 1941, The IIA is an international professional association with global headquarters in Lake Mary, Fla., USA. The IIA is the internal audit profession's international standard-setter, sole provider of globally accepted certifications, and principal researcher and educator.

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