

PERFORMANCE AUDITING: KEY STEPS FOR MEASUREMENT

BY RONELL B. RAAUM, STEPHEN L. MORGAN, AND COLLEEN G. WARING

As the information age accelerates into the innovation age, the role of performance auditors in measuring, auditing, and improving organizations continues to become more essential.

Auditors got into the business of developing information about organizational performance largely because traditional sources of information could not fully meet the requirements of managers, elected officials, and others who need to know and act on a wide range of performance aspects. Performance auditors develop and report information on all aspects of performance — financial and nonfinancial. They may also provide specifics about where and how improvements can be made and the likely impact of those improvements.

According to survey responses from public sector auditors throughout North America, an average of 61 percent say they have conducted a performance audit in the past year. The rate rises to 68 percent for respondents specifically in core government. In comparison, the rate is only 43 percent for those in government-operated services and for those in government-owned enterprises (see Appendix A, Exhibit 1).

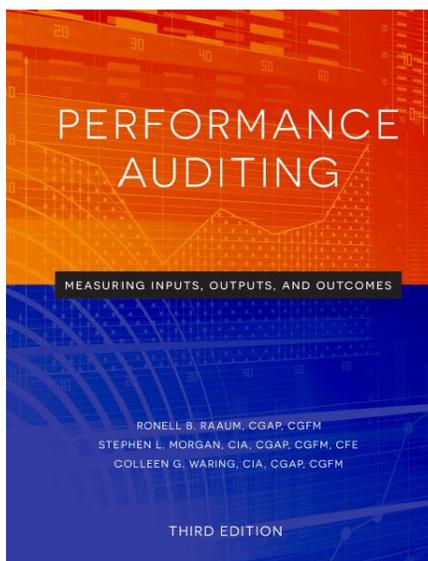
Those who are involved in performance auditing spend a substantial percentage of their resources on it. Core government has the highest average at 53 percent. For those in government-operated services, the average was 47 percent, and for government-owned enterprises, it was 38 percent (see Appendix A, Exhibit 2).

Performance auditing promotes best practices by measuring and reporting on all performance — both good and bad. This article focuses on key considerations for performance measurement, including efficiency, timeliness, quality, and program results.

SUMMARY

Performance auditing promotes best practices by measuring and reporting on all performance — both good and bad. This article focuses on key considerations for performance measurement, including efficiency, timeliness, quality, and program results.

For complete information about performance auditing, see the fully revised third edition of *Performance Auditing*, available soon from the [IIA Bookstore \(bookstore.theiia.org\)](http://bookstore.theiia.org).



Criteria for Assessing Performance

Before you measure existing performance (the *condition*), you need to identify appropriate *criteria* for assessing performance. With criteria you can determine whether the existing performance is a best practice to be emulated or an area in need of improvement. One of the most common methods for identifying performance criteria is *benchmarking*.

Benchmarking compares specific performance across entities doing the same or similar work. The highest

performing entity sets the benchmark — the criteria for how good performance can be. You can look to the benchmark organization for information on the *causes* of good and poor performance, and on best practices ideas for lower-performing entities to follow. Benchmarking has its greatest utility in auditing output performance, but it applies as well in auditing acquisition of resources where

the concern is with the type and quality of resources, the timing of their acquisition, the price paid, or the efficiency of the organization's acquisition processes. When benchmarking, auditors measure the level of current performance — the *condition*.

The 10 steps for benchmarking for performance auditing are:

1. Select the audit subject.
2. Select the benchmark entities.
3. Measure performance within both the audit subject and the benchmark entities.
4. Compare performance to determine if a gap exists between the benchmarks and the audit subject.
5. Determine if the performance gap results in a significant effect.
6. If so, brief management on findings and obtaining further explanations for the gap.
7. Collect data on possible causes for the performance gap.
8. Develop alternative solutions to close the gap.
9. Communicate findings with responsible officials to discuss alternative solutions.
10. Recommend the best solution.

Measuring Existing Performance

One aspect of performance auditing that tends to separate it from general auditing is the emphasis on measurement of results. Let's look at four key areas for measuring existing performance: efficiency, timeliness, quality, and program results.

Efficiency

Efficiency represents the relationship between inputs and outputs. Depending on the availability of good data, the effort involved in measuring efficiency can vary widely from easy to complex; however, the payoff can be tremendous. An audit that identifies inefficient operations and highlights opportunities for improvement provides examples for others to emulate.

The 10 steps for audits of efficiency are:

1. Select outputs.
2. Select inputs.
3. Select measurement method.
4. Select unit of measure (e.g., applications processed, or training classes held).
5. Select criteria.
6. Identify the needed data and assure its quality.
7. Collect data.

NEW EDITION OF PERFORMANCE AUDITING

The growth of performance auditing comes from its ability to promote best practices by measuring and reporting on all performance — both good and bad. This balanced approach celebrates accomplishments and finds solutions to problems.

The fully revised third edition of *Performance Auditing* provides step-by-step guidance to incorporate this approach into your audit function, along with updated references to INTOSAI, GAO, and IIA guidance. Be among the first to obtain the third edition of *Performance Auditing* by ordering your copy directly from the [IIA Bookstore](#).

8. Prepare measures.
9. Determine the consequences.
10. Determine causes.

Timeliness

Compared to other aspects of performance, timeliness is relatively easy and inexpensive to measure. Different program types will prioritize different dimensions of timeliness. For example, *queuing* time is most important in a driver's license renewal function, while the total *elapsed* time matters most to a repair operation where the equipment is out of service until repairs are complete. In contrast, *response* time is a critical measure for emergency responders, such as fire and police operations.

The 10 steps to develop timeliness measures and analyze the results are:

1. Identify outputs.
2. Select the relevant dimension of timeliness.
3. Select unit of measure.
4. Determine criteria.
5. Select analysis technique.
6. Identify needed data and assure its quality.
7. Collect data.
8. Prepare measures.
9. Determine consequences.
10. Determine cause.

Key dimensions of timeliness include: elapsed time, waiting time, queuing time, response time, and on-time. The units of measure can be minutes, hours, days, and months; seldom weeks and years.

Quality

The dimension of quality being measured will determine whether auditors will find measurement easy or complex. For some services, such as medical care and law enforcement, quality measurement is elusive. The difficulty comes in selecting a unit of measure that defines quality. For many government services, quality may rest in the eye of the customer. Thus, auditors may find that entity-prepared measures or customer surveys work well.

Auditors need to consider which of three categories of quality will be most relevant: quality of service products, quality of service delivery, or quality of existing infrastructure. In many cases, auditors will use soft data, such as observation and customer surveys, to prepare quality measures. In addition, auditors can use *cost of quality* (that is the consequences of re-work) to represent the consequence of substandard quality.

The 10 steps for measuring and assessing quality are:

1. Identify the relevant outputs.
2. Select the quality dimension.
3. Select a unit of measure.
4. Determine the analysis technique.
5. Identify needed data and assess its quality.
6. Collect data.
7. Prepare measures.
8. Select criteria and determine the condition.
9. Determine consequences.
10. Determine the cause.

Program Results

Measures of program results are used to determine the impact attributable to an initiative, or intervention. An intervention is any change that can affect a program, for example a new program, a change in procedures within a given program, or the installation of a new computer system.

Findings related to program results are different from traditional audit findings. Findings from program results

must include information about the following four elements: (1) condition *with the intervention*, (2) condition *without the intervention*, (3) *effect*, which is the benefits attributable to the intervention, and (4) *cause*, which is the intervention itself.

Intervention impacts are typically quantified using the following evaluation designs: pre-post analysis, interrupted time-series, comparison-group analysis, evaluation synthesis, and contribution analysis.

In measuring program results, auditors need to be alert for the potential of rival causes.

The eight steps to quantify the impact of an intervention are:

1. Review the program's mission and context.
2. Determine baseline need.
3. Assess program design.
4. Compare program design to the program as implemented.
5. Select what to measure and the unit of measure.
6. Select the evaluation design.
7. Identify and collect needed data.
8. Make the analysis.

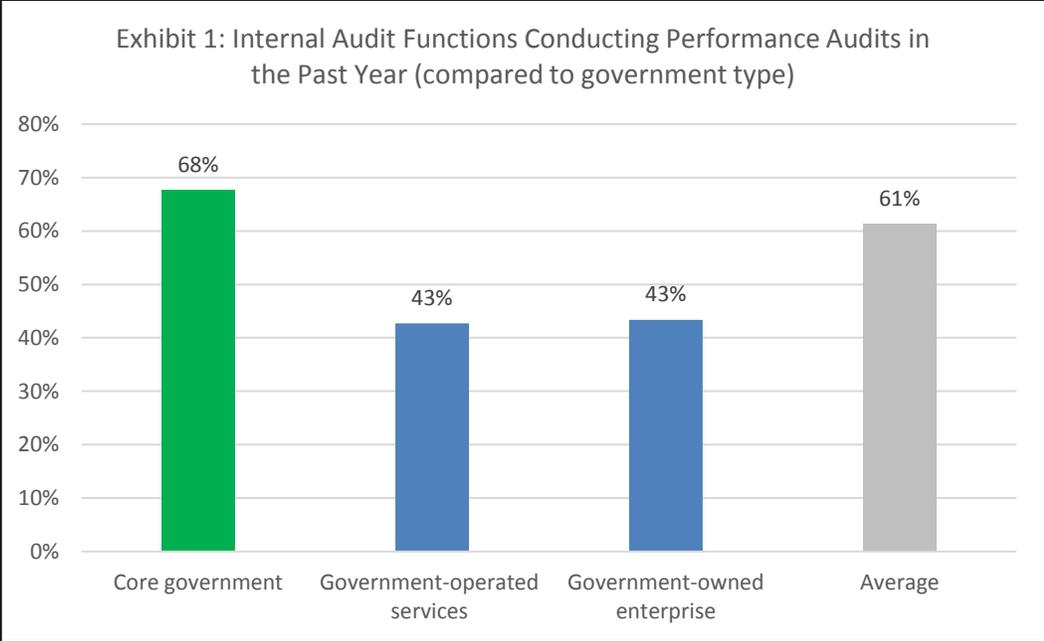
Conclusion

Measurement is a basic job of performance auditors. Performance auditors assess performance — efforts and accomplishments — and performance measurement provides an objective, impartial basis for doing so. The effective auditor must choose the right measures, prepare them correctly, and fairly report performance results in the context of audit findings. Thus, it is critical that auditors understand the basics of performance measurement. The more that auditors know about measuring and assessing performance, the more they contribute to the success of the organizations they audit.

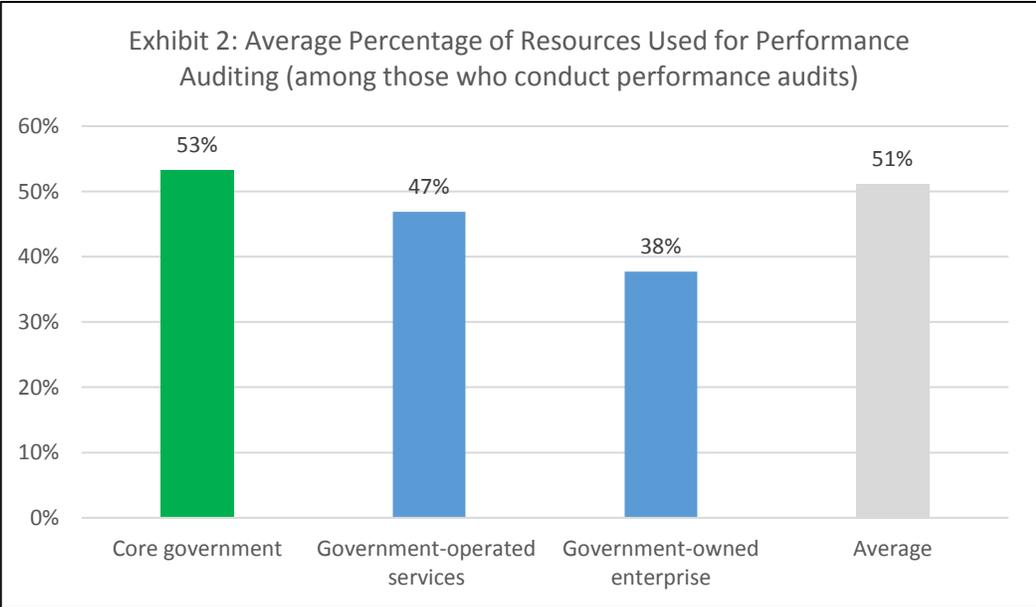
Notes

This article is adapted from *Performance Auditing*, third edition, by Ronell B. Raaum, Stephen L. Morgan, and Colleen G. Waring, published by the Internal Audit Foundation, 2016. The book is available for purchase at [IIA Bookstore \(https://bookstore.theiia.org/\)](https://bookstore.theiia.org/).

Appendix A



Source: CBOK 2015 Global Internal Audit Practitioner Survey, administered by the Internal Audit Foundation. Q54: In the past calendar year, did your internal audit department conduct performance audits? For core government, n = 405. For government operated services, n = 82. For government-owned enterprise, n = 60.



Source: CBOK 2015 Global Internal Audit Practitioner Survey, administered by the Internal Audit Foundation. Q54a: What percentage of internal audit resources were used to conduct performance audits in the past calendar year? Responses limited to North American public sector respondents who answered yes to Q54: In the past calendar year, did your internal audit department conduct performance audits? n = 214.

About the Authors

Note: Ronell B. Raaum, Stephen L. Morgan, and Colleen G. Waring are the co-authors of the third edition of *Performance Auditing*.

Ronell B. Raaum, CGAP, CGFM, has been involved in the profession of performance auditing for 50 years as a practitioner, trainer, and author. He retired from the Government Audit Training Institute (GATI) after 20 years of service. Raaum is co-author of two books on performance auditing: *Performance Auditing*, third edition, and *Operational Auditing*, and served on the IIA steering committee that developed the Certified Government Auditing Professional (CGAP) designation, and subsequently helped develop the first CGAP review course.

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