# Auditing and Performance Measurement and the InstaMeasure! Toolkit for Auditors

Presented to the
Association of Government Accountants
Hawai'i Chapter

Government Professional Accounting Seminar (GPAS)
September 2018

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Session Program

Abstract: As budgets tighten, the focus on the performance of government continues to intensify. Does your organization effectively develop, use, and evaluate performance measures? How can they be improved? This full-day course will take you through the performance measurement process. We'll cover the full spectrum of measurement in a condensed, straightforward format. Participants will leave the session with take-away tools they can use immediately on the job. This is a training session on Performance Measurement for auditors, focused on (1) Developing measures, (2) Implementing measurement systems, and (3) Evaluating measurement systems.

I.      Overview of Performance Measurement
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                Introductory Case Study -- Immunization Program

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I.	Overview of Performance Measurement
		"What Gets Measured Gets Done"
		Introductory Case Study -- Immunization Program

Albert Einstein wrote that "what gets measured gets done."  Others note that if you tell someone how they will be measured, that determines how they will perform.  A major airline's ticket sales agents were told they always had to balance their cash tills, and they always did!  Measurement has always been critical at an individual level.  Setting goals has been critical for people and for organizations.

Today, we'll follow performance measurement from its initial establishment (how to develop a measurement system), using the goals and objectives of an organization to plot and plan achievements, and finally to the evaluation of measurement's effectiveness.

Our session will involve a series of case examples, adapted from actual measurement situations.  I hope that you will see some similarities and differences between the case study examples and your organization.  We'll conclude with a summary of today's "takeaway" lessons, and a listing and description of key resources to turn to as you proceed in your organization's measurement effort.

I've kept the handouts, descriptions, and examples intentionally simple and straightforward -- part of the "less is more" philosophy.  We'll discuss more details as the session proceeds, and feel free to ask any and all questions as we go.  But understanding the concepts and principles is so critical that I have geared these handouts to develop this understanding.

Discussion Points:

•	Measurement is a key ingredient of initial tracking.
•	Measurement appears neutral and numerical, but at its core, still involves human determination of what to measure and how to report it.
•	Unlike financial auditing, medicine, law, real estate, and other fields, performance measurement has no unique, specific standards for its practitioners to follow.  Specifically, there are no specific education, independence, peer review, or other conduct standards for performance measurement practitioners to follow.  But auditors can audit measurement using auditing standards.
•	Measurement should focus on key organizational goals (as we will discuss in the next module) as well as the organization's tolerance and appetite for risk.  (ref. Kennedy's moon landing speech vs. the Star Trek Mission.)

Measurement efforts should consider the audience -- is your primary audience the public?  Elected officials?  Stockholders?  Program managers?  Different audiences may require you to select different measures or presentation formats, but we must ensure consistent and non-duplicative reporting.

Introductory Case Study:  A Rural Childhood Immunization Program

Assume that a state child immunization program employs nurses to travel to health delivery sites around the state, providing required childhood vaccinations.  Let's assume that each child is vaccinated only once with a combination vaccine, between the ages of 1 and 2.  Discussion points include:  Inputs, Outputs, Outcomes, Efficiency, Cost, and Timeliness.

Basic Data for 2018:

Children of vaccination age:  1,000

Total Program Budget:  $10,000

Traditional Budget Breakdown:
(This budget reflects traditional line-items.  Note that they aren't linked to the particular program.)

| | |
|---|---|
| Salaries: | $5,000 |
| Benefits: | $1,500 |
| Office expense: | $1,500 |
| Supplies: | $1,000 |
| Travel: | $1,000 |

Performance-Based Budget Breakdown:
(This budget reflects a single line-item, showing the key service provided by the program budget)
        Vaccinate 1,000 Children:    $10,000

Unit Cost:
Unit cost is calculated by dividing total program cost (in this case, $10,000) by the number of units of service provided (in this case, 1,000 children vaccinated) for a unit cost of "$10 per child vaccinated" ($10,000 / 1,000).  Note:  This assumes that all overhead/indirect costs are included in the $10,000 program budget.  If they are not, the program budget and the unit cost will be higher.

Benchmarking:
Benchmarking is intercompany or interagency comparison for the purpose of identifying "best practices".  In this case, let's assume that the average rate for the same childhood vaccinations in this state is $9.50, with the following comparisons:

| | | |
|---|---|---|
| Government's Unit Cost: | $10.00 | (1,000 vaccinations) |
| Acme Health Clinic: | $11.50 | (2,000 vaccinations) |
| University Clinic: | $ 9.00 | (7,000 vaccinations) |

Calculate average by multiplying each provider's unit cost by the number of vaccinations, so:

|                   |                   |                    |
|-------------------|-------------------|--------------------|
| Government:       | $10.00 X 1,000 =  | $10,000 total cost |
| Acme Clinic:      | $11.50 X 2,000 =  | $23,000 total cost |
| University Clinic:| $ 9.00 X 7,000 =  | $63,000 total cost |

Average Weighted Unit Cost: 10,000 shots at $96,000 total cost = $9.60 avg. unit cost

What can benchmarking and average cost tell us about this program?

How can the department respond to typical budget cutting exercises?

What do you think, within the state program, the following measures would be?

Input

Activity (also known as Process)

Output

Outcome

Efficiency

Cost

Timeliness

Concluding thoughts on introductory case study:

Use key measures, simply
Understand linkages to budget and to interagency/intercompany comparisons
Show "performance-based" numbers as often as reasonable and to supplement traditional budget presentations

Discuss "benchmarking" as it applies to comparisons beyond the same industry groups.

Next, we'll link the introductory case study to a process for how we can develop a measurement system:

Remember the Outcome-Output-Process-Input chain.  We'll discuss this as we proceed, but it's very important to track the results of an operation (Outcomes and Outputs) back through to the Inputs (like money spent on the process or staff time spent).

Consider and discuss (from homework):

- Which results do you measure in your organization?

- How are organization results connected to individual performance?

- How are results and individual performance reported?  To whom?

II.      Developing Performance Measurement Systems
                         What's A "Performance Measurement System"?
                         Measuring What's Important (Or Should Be Important)
                              To Your Auditee
                         Linking Measures to Missions
                         First Case Study – Fire and Rescue

"Systems" need not be electronic, nor do they need to be based on expensive or complicated models.  The very best systems are those that are intuitively logical, reasonable, and understandable.

Remember that there are no fixed national standards for measurement -- there are a great many excellent examples we will discuss, but unlike other fields, there are no specific national standards.

Measurement is an "art" as well as a "science", so while there are no absolutes for measurement or how to report measures, departments with measures should "show their work" to allow others to interpret, analyze, and understand where measures came from.

In my opinion, it is OK to simplify basic measures in order to get a "rough cut" and show orders of magnitude (but not precision).  One initial example is to use only labor costs to calculate costs in an organization that is heavily labor-based in its total costs.

Example:  A police department has the following budget:
            Salaries and Benefits: $800,000
            Facilities:            $150,000
            Depreciation:          $ 50,000

        If you know that the staff spends 90% of their time responding to emergency calls, it may not be important to calculate the percentage of Facilities and Depreciation that are spent on emergency calls.  We can assume that facilities (like police precinct offices) and depreciation (like on patrol cars) are also linked to where staff spend their time, and therefore we may not need specific square-foot weightings of each facility in order to conclude that about 90% of the entire budget is spent on emergency response.  Most government agencies are weighted toward people (therefore salary), so understanding where staff spends their time will literally lead you to where the organization spends its money.

Criteria for Good Measures:
  • Valid
  • Reliable
  • Useful
  • Collectable
Keep these in mind as we proceed, since a good measurement system must be based on good measures!

Discuss Key Terms and Examples:

Set I:  Vision and Mission
Vision -- The broad, overarching theme of the organization.  May not be specific.  "Be all that you can be", "To be the best organization you have ever experienced as a customer", "Be the world's leading retailer", "Serve as our customers' first choice" are examples of vision statements.

Mission -- The specific objectives of the organization.  Examples of mission statements include the "We, the people" clause of the Declaration of Independence, the mission of the starship Enterprise, and many corporate mission statements.  Often, mission statements include three to five specific objectives, such as "explore strange new worlds, seek out new life and new civilizations," or "to form a more perfect Union, establish justice and ensure domestic tranquility", or "to serve our customers with quality products, excellent service, and high value (with mention of a specific product).

Goals -- Even more specific than mission statements, goals are "dreams with deadlines", including Kennedy's 1961 moon landing speech -- to, by the end of the decade, land a person on the moon and return them safely to earth.  State government goals could include responding to emergency calls within 15 minutes, vaccinating 100% of children by a specific age, reducing violent crime by 50% within two years, etc.  Goals are the most specific with percentages and exact deadlines.

Activities (also known as "Processes") -- The work steps taken to move toward a goal, consistent with the mission and vision statements.  As the motivational poster says, "an task without a goal is drudgery, a goal without a task is a fleeting dream, but a task with a goal is the hope of the world!"  Ideally, most or all of an organization's activities would link directly to its goals, its mission, and its vision.  If you are performing activities not related to the organization's mission, why?

We'll now show these terms in order:

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------------------------------------------Vision-----------------------------------------
                  ----------------------------Mission----------------------------
                         ---------------------Goals---------------------
                              ----------Activities/Processes-------
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Vision is broad and very general.
Mission gets more specific and quantifiable.
Goals are very specific and quantifiable (with due dates, even!)
Activities/Processes are how we consume resources to accomplish the goals (and therefore the mission and vision).

Discussion:  How do your organization's activities match the mission?  Remember the words of the Cheshire Cat to Alice in Wonderland!

Set II:  Input, Output, and other Calculated and Long-Range Measures
Input -- Resources used or consumed in an activity.  Could include time, money, or any other resource.  Usually expressed as "number of" some unit of input (number of dollars spent, number of hours spent, etc.)

Activity/Process -- See above (in Set I).  Activities and processes are literally the "factories" that take inputs and use them to produce outputs.

Output -- The immediate result of an activity.  Usually expressed as "number of" some unit of output (number of children vaccinated, number of meals delivered, number of emergency responses, etc.)

Efficiency -- The ratio of outputs per input (literally, dollars or hours spent per unit of output).

Effectiveness -- Did the activity complete the job?  Specifically, did the expenditure of resources accomplish the intended result.  The final verdict on effectiveness may have to wait for the outcome (see below).

Outcome -- The long-range result of an activity (percentage reduction in disease, percentage improvement in nutrition, etc).  An outcome may not be easily tracked or easily or directly related to specific activities (maybe this was a mild flu season and the reduction in disease may not be linked directly to vaccination).

Discuss the difficulties in using outcome measures.  Discuss how "activities" are linked to both the Mission-Goal-Activity chain and to the Input-Activity-Output chain.




Set III:  Concepts and Terms You've Heard
"Results-Based Management"
"Managing for Results"
"Management by Objectives"
"Total Quality Management"

Discuss:  Are there other terms like these?  How do these (or others) link to performance measurement?  Can performance measurement assist some or all of these concepts?  How can government audits of measurement systems help?  Consider "performance management", which combines performance auditing and performance measurement efforts.

Set IV:  Links to Budget and Results, and Easy Kits to Frame New Measurement Systems

Efficiency – Outputs per Input (cost per unit)
Effectiveness -- Getting the job done
Quality -- Conformance to expectations
Cost -- Expense and/or Unit Cost (Inputs per Output)
Timeliness -- Cycle, In-Process, Waiting, and other measures (also see "Quality" if timeliness is based on a customer expectation)

One basic measurement system might include three, four, or all five of these items.  For example, a basic but effective starting point for a new measurement system for a public sector service organization might be to use Quality, Cost, and Timeliness, with these measures for each theme:

Quality:  Conduct a survey of clients (all clients or a sample) as to whether they felt the organization's product or service was of acceptable (or high) quality.  Examples include postcard surveys, asking the client at the time of service, or having a survey organization (including some university Statistics/Survey departments) conduct a formal survey.

Cost:  Calculate total and unit cost (inputs divided by outputs) for the product or service. Compare to other benchmarks.

Timeliness:  Measure how timely the product or service was, based on internal guidelines, customer service expectations, competitors, or all of the above.  Use a reasonable measure for ambulance response time (or for college graduation time). Seconds matter in one, years matter in the other one.

First Case Study:  Public Safety Program (Police)

Assume a program that provides police services.  The program receives $1,000,000 per year and spends that amount.  Its traditional budget is:

    Salaries and Benefits: $650,000
    Equipment Cost:        $250,000
    Training Cost:         $100,000

Its performance budget is a single line-item:

    Provide response to 1,000 emergency calls per year: $1,000,000

The program has provided emergency response – within budget – to between 950 and 1137 calls per year for the past five years.

Discuss the following:

Inputs:


Activities/Processes:


Outputs:


Outcomes:


Cost:


Timeliness:


Efficiency:


Quality:

What are the approximate "unit costs"?  Does it matter whether a call is simple (a small fender-bender with no injuries) or complex (a bank robbery with a hostage situation)?

How would you "benchmark" against this program's performance?

Discuss the information an organization would need to develop, and any tracking systems they would need to develop in order to implement a performance measurement system for this program.

Look again at the criteria for good measures.  Will these be difficult to meet?  Why or why not?

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For audit offices, you may have core measures for your work – I've seen audit functions measuring some or all of the following:

*  Cost per audit hour (total budget divided by "billable hours" so if an office budget is $400,000 and spends 4,000 hours auditing, cost per audit hour would be $100.   This can be used to benchmark against other audit functions, to consider comparable outsourced rates, and to track changes over time.

*  Dollars saved from audit recommendations vs. dollars spent (percentage return) – can be subjective, consider your work results and the cost to get them.

*  Number or percentage of audit recommendations that management has implemented.

*  Audit reports issued on schedule (number or percentage)

*  Number of audit reports issued (planned vs. actual – how many did your office intend to release and how many did it release?)

*  Other ideas?   Staff retention, cost per audit report, etc.?

III.     Implementing Performance Measurement Systems
                    Challenges to Implementation
                    Take-Away Tool Kit -- InstaMeasure!
                    Second Case Study – Public Health Program (Hospital)

Challenges to implementing a performance measurement system are many-faceted.

- Management may not want to be measured or evaluated
- Managers and staff may disagree (with each other or among themselves, or with an auditor or other outside expert) on how to measure and what should be measured.
- Measurement reports themselves may be critiqued or edited, and become less useful to decision makers.
- Managers may want to change measures mid-stream to capture their key (and new) initiatives, at the expense of existing core measures.
- These ideas are just a few -- can you think of other challenges?

How to overcome challenges to measurement -- a tricky issue.  Most sources describe the help provided by "executive champions" or other highly-placed leaders who support the measurement initiative.  There are many examples of measurement efforts succeeding under some leaders and of failing under other leaders.  What can organizations do to have their efforts succeed under different management styles and/or different managers?

One catalyst for measurement is to show management some initial measures and to illustrate how simple (yet effective!) a measurement system can be.  Here's a tool to help you do just that, the "InstaMeasure" toolkit!

This toolkit can be used by you in several ways:

First, you can use the kit to develop measures of your own activities.  Take a look at the model through the lens of measuring things like units of service provided or transactions tested.

Second, you can use the kit to assist other departments to develop their own measurement systems.

Third, you can use this toolkit and other resources at the end of these course materials as part of the criteria you might use in measuring your success or the success of other agencies' measurement efforts.

Easy Kit of Measures to Take-Away!  --   The "InstaMeasure!" Toolkit!
The "easy kit" idea has managers use some (or all) of these measures to start tracking measurement data over time.  It's a takeaway tool you can literally use tomorrow at work!  Here's a sample kit to take with you:

(1)  Identify one or two key product(s) (can be a service or a good, like a report, a customer contact, or a specific deliverable like a completed form).  The product will be an "output".

(2)  Estimate how much of the organization's total time is spent producing this product (could use timesheets or rough estimates).

(3)  Multiply the organization's total budget by the percentage in #2 above.  This results in a ballpark estimate of their cost to provide the product or service.

(4)  Estimate the number of times the organization produced the product (per year or per month, with data to match the time period of the budget you used in #3).

(5)  Consider performing two or three of the following tasks to measure performance:

    (A)  A short customer survey at point of service (2-3 questions, like "Did you get what you came here for?" and "Were you satisfied with our service?")  Consider a 5-point scale (Totally Satisfied, Mostly, Somewhat, Mostly Not, and Not Satisfied) or simple "Yes/No" answers.

    (B)  Tracking timeliness -- Chart/graph when your service or good was provided.  Consider pie charts, bar charts, or perhaps a "Yes/No" as to whether the output was delivered "on time".

    (C)  Cost -- See above.  Unit cost is calculated by dividing the cost to produce the outputs by the number of outputs produced (for example, $10,000 to produce 1,000 school lunches = $10 per lunch OR $100,000 to provide 10,000 officer responses = $100 per response)

    (D)  Efficiency -- calculate by dividing number of outputs produced by the cost to produce them (literally, "number of outputs produced" divided by "number of dollars spent").

Remember -- ALL of these items are "subjective" in one way or another.  "On time" depends on the schedule that management sets.  Customer service measures (also Quality measures) change over time and based on many factors.  Try to perform these measurements at least annually, and ideally more often.  Examples of cost per patient hospital stay and cost per fire truck run can help illustrate these concepts.

Discuss:

With some rough estimates of data, how could an organization's outputs be measured?


What sorts of results would management and the public expect to see?

Second Case Study: Hospital Program

A public health hospital provides outpatient and inpatient services to community members. The hospital bills insurance providers, but is interested in measuring its own costs beyond the fixed amounts that insurance companies and the government allow it to bill.

Here are the initial data points:

Number of inpatient visits:    1,000
Budget (Annual) for inpatient services:        $1,000,000

Number of outpatient visits:  10,000
Budget (Annual) for outpatient services:        $1,000,000

Total budget for inpatient and outpatient services:    $2,000,000

| | |
|---|---|
| Salaries: | $  600,000 |
| Supplies: | $  250,000 |
| Utilities/Misc.: | $  150,000 |
| Pharmaceuticals and Medical Equipment: | $1,000,000 |

Discussion:

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In implementing this measurement system, which other measures would you implement? (consider ideas from InstaMeasure).

As a hospital administrator, which questions would you ask about the measurements?

As a legislator overseeing public health programs, which questions would you ask?

IV.     Evaluating Performance Measurement
                Auditing Measures and Measuring Audits
                Reference Information -- GASB and other Resources

Performance Measurement and Performance-Based Budgeting (which, with performance auditing, could comprise a system of performance management in an organization) are critical ingredients of governance.

Budgeting should base the allocation of resources on their use and value to the mission of the organization.

Measurement can allow an organization to track its progress toward goals.  However, neither measurement nor budgeting have specific standards (as auditing has Yellow Book or IIA standards to govern it).  This means that any organization (and any person) can prepare a performance-based budget and/or a performance measurement system without necessarily following any particular professional guidelines.

Recall some of the key auditing standards:

*       Independence
*       Quality Control (specifically an external peer review)
*       Continuing Education

Measurement personnel and systems may not be independent of the area they are measuring, may not have a regular quality control programs or processes, and may not adhere to requirements for continuing education.

GASB, the Governmental Accounting Standards Board, based in Norwalk, Connecticut, has excellent information for governments (geared to state and local governments) to implement and use performance measurement systems.  Their website (www.gasb.org or the specific SEA site at www.seagov.org) has great links to measurement information as well as guidelines and successful examples of local and state measurement efforts.

I've seen three primary structures for tracking and reviewing government performance measurement systems, and each has strengths and opportunities for improvement:

1.  Auditors implementing measurement systems (auditors measure and audit)

2.  Auditors auditing management's measurement systems (management measures, auditors audit)

3.  Management auditing/evaluating its own measurement systems (management measures and evaluates)

Comments/Questions?  Which systems need improvement?  What are each system's strengths?

V.      Final Case Study:  Putting it all Together

For an organization you are auditing, please develop an initial outline of how you might measure performance.  Focused on your key outcomes and "deliverables" and beginning with the organization's vision and mission, identify the following:

Vision

Mission

Goals/Objectives (per budget cycle or per year)

Inputs

Activities/Processes

Outputs

Outcomes

Cost

Quality

Efficiency

Effectiveness

Timeliness


Take a look at the organization's traditional budget, and propose a simple "performance-based" budget.  How is this different?


How does a "performance-based" budget help or harm tracking objectives and accomplishments?

VI.     Conclusions and Take-Home Tools and Resources

Today, we've covered some key topics in performance measurement.  Key concluding thoughts:

*       Link measurement efforts (their design, implementation, and daily use in the organization) to the organization's core mission.  Measure only what is important to the organization.  This means that measurers and managers need key agreement on the organization's mission and core values.
*       Spend measurement resources where the organization spends its time and money.
*       Remember Deming's theory to "try and track" -- as new ideas are implemented in the organization, make sure to measure the "before and after" to determine whether new efforts are effective.
*       Consider the professional standards for auditing, law, or other professions -- how can we borrow from these themes to ensure effective measurement systems?
*       Prepare understandable and clear reports, focused on a few key measurements. Report changes over time.
*       Share your successes and challenges with other professionals.  Associations like the AGA can be vital links in communicating.  Consult the GASB web resources on measurement.  Consider applying for organizational measurement certification through the AGA, and/or consider the "citizen-centric" reporting model for governments (www.agacgfm.org).

Top Resources for Measurement Information and Assistance:

Keep this handout!  Not only does it include the links below, but also has the key "skeletons" to develop initial measurement systems.

Develop and use simple, straightforward measures.  As an initial rough cut, it is OK to take an organization's core product (whether it is a meal or vaccination provided, an ambulance trip taken, a bus route run taken (or bus passenger served)) and divide these outputs into the organization's total program costs (inputs). For example, if a $1,000,000 per year fire department responded to 1,000 emergency calls last year, the rough cost per response is $1,000.  From this, you can benchmark, gain information on re-evaluating the fee structure, explain information to the tax base, and other results.

GASB resources (http://www.gasb.org  then click on "Performance Measurement" button on left side of screen), also at http://www.seagov.org -- excellent centralized resources for measurement with direct links to key organizations' measurement efforts, including Maricopa County, City of Portland, Multnomah County, State of Minnesota, State of Oregon, and scores of other excellent examples.  This, to me, is the best centralized one-stop site for performance measurement information.

Sloan Foundation (http://www.sloan.org), follow links to governance/ grant information, also includes success stories from measurement efforts.

Benchmarking in the Public and Nonprofit Sectors by Patricia Keehley and Neil Abercrombie, is a through review of the process and results from benchmarking, containing excellent tools and worksheets to help you assess readiness to benchmark, the process itself, and examples of how to manage the results.

Governing Magazine (http://www.governing.com), contains links to obtain an excellent book on measurement, Measuring Up 2.0 by Jonathan Walters.


Thank you for attending today's session!