

Risk Based Performance Audit Project Planning

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Risk Based Performance Audit Project Planning

OBJECTIVES

- I. Describe the performance audit planning process
- II. Understand risk and vulnerability organizational models
- III. Understand risk and vulnerability assessment process
- IV. Perform a risk and vulnerability assessment at the assignment level
- V. Develop audit objectives and sub-objectives
- VI. Identify methodologies to address objectives
- VII. Best Practices Checklist for audit planning

The Performance Audit Planning Process

Auditors Enhance the Value of Existing Information

“Auditing – An examination of accounts or records to check their accuracy”

The Performance Audit Planning Process

Auditors Develop New Information

“Performance audits are defined as engagements that provide assurance or conclusions based on an evaluation of sufficient, appropriate evidence against stated criteria, such as specific requirements, measures, or defined business practices. Performance audits provide objective analysis so that management and those charged with governance and oversight can use the information to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability. (1.25) Performance audit objectives may vary widely and include assessments of program effectiveness; economy and efficiency; internal control; compliance; and prospective analyses. These overall objectives are not mutually exclusive. (1.28)

Source: Government Auditing Standards, 2007 Revision

The Performance Audit Planning Process

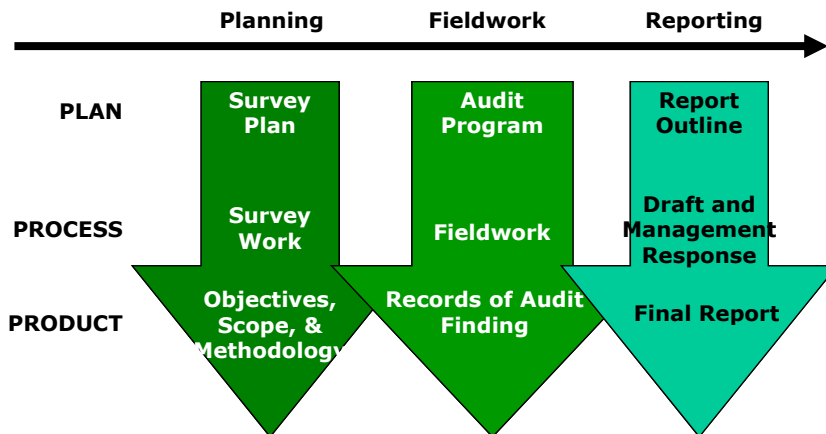
Auditors Develop New Information On Performance Aspects or Measures

Customer satisfaction	Mission/purpose achievement
Cost-benefit and cost-effectiveness	Return on investment
Profit	Financial condition
Quality	Timeliness
Quantity (outputs)	Cost
Economy	Efficiency

5

The Performance Audit Planning Process

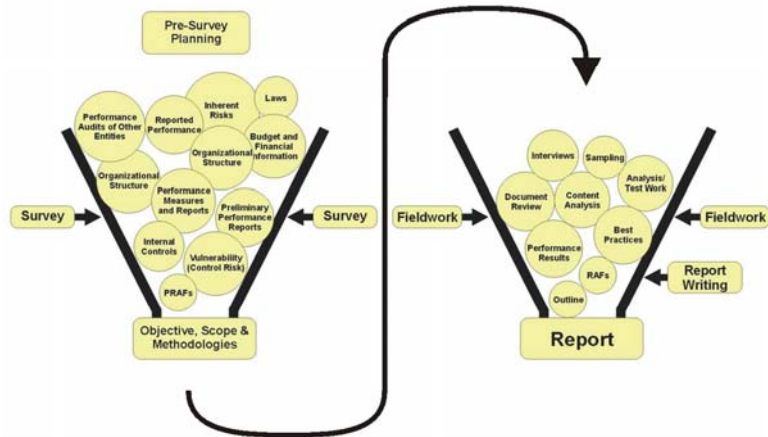
Audit Process



6

The Performance Audit Planning Process

Audit Process – Alternative View



The Performance Audit Planning Process

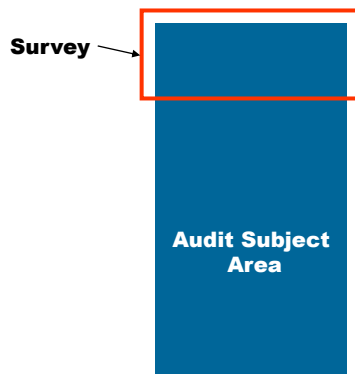
Survey Process

Focus:

- Broad
- General/Basic

Objectives:

- Gain an understanding of the audit subject area
- Identify and rank:
 - Potential consequences associated with the subject area
 - Vulnerability to each consequence



Survey Process



Survey Outputs

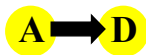
- **Risk/vulnerability assessment**
- **Audit objectives**
- **Sub-objectives and preliminary findings**
- **Audit program (methodologies and scope)**

Outcomes of the Planning (survey) Stage

- **What do you want to know at the end of planning?**
 - *What is the question we are trying to answer?*
 - *Why should the client care about the answer?*



Risk and Vulnerability Organizational Models

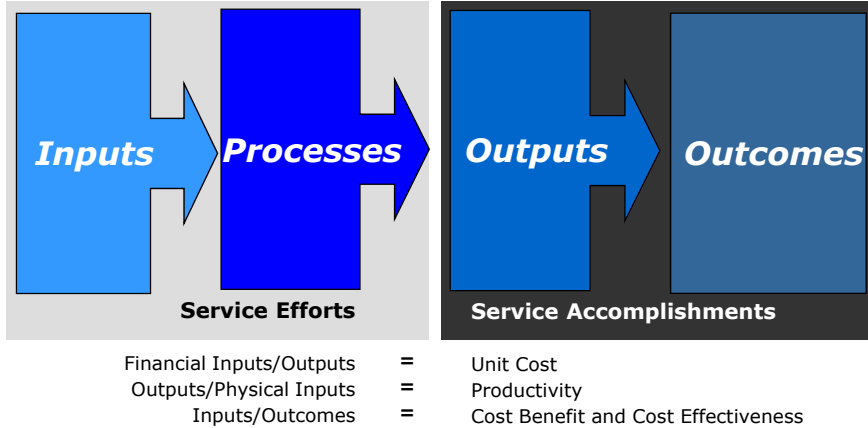


Inherent Risk
(program performance)



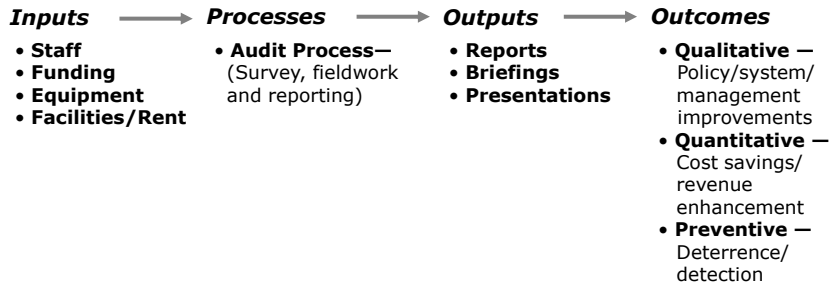
Accountability Control Risk
(key accountability subsystems)

A Service Delivery System

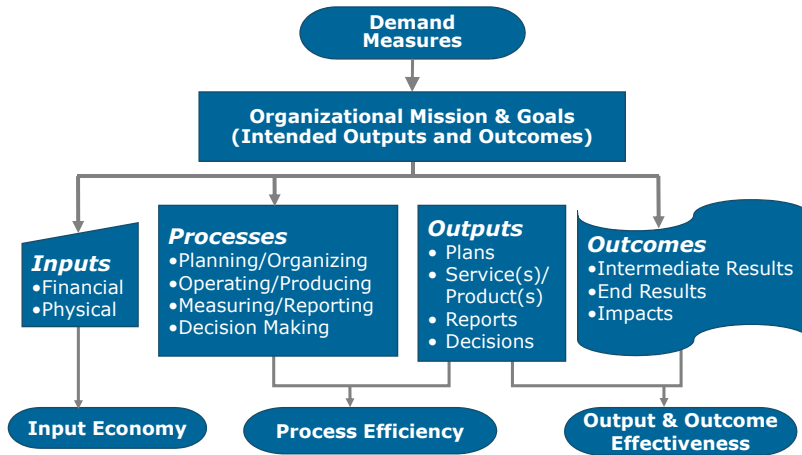


A Service Delivery System: Auditing Program

Audit Program or Activity



A Government Service Delivery Model (expanded)



Police Patrol Example Program

Inputs	Process	Outputs (Services Delivered)	Outcomes (Results)

Expectations of Government Officials

- ◆ “Government officials and recipients of federal moneys are responsible for carrying out public functions efficiently, economically, effectively, ethically, and equitably, while achieving desired program objectives.” (GAS—2007 Revision, page one)

Program Performance – Risk and Vulnerability Organizational Models

B Government Performance Expectations

MISSION PERFORMANCE GOALS			
INPUT ECONOMY	PROCESS EFFICIENCY	OUTPUT EFFECTIVENESS	OUTCOME EFFECTIVENESS
<ul style="list-style-type: none"> •Financial –Amount, timing •Physical –Quantity, quality –Timing, price 	<ul style="list-style-type: none"> •Productivity •Unit Cost •Operating Ratios 	<ul style="list-style-type: none"> •Quantity •Quality: products, delivery •Timeliness •Price/Cost 	<ul style="list-style-type: none"> •Mission&Outcome Goal Achievement •Financial Viability •Cost-Benefit •Cost-Effectiveness
CROSSCUTTING PERFORMANCE GOALS			
<p>←..... Compliance with Laws and Regulations→</p> <p>←..... Resources - Safeguarding - Infrastructure→</p> <p>←..... Continuous Improvement→</p> <p>←..... Reliability, Validity, Availability of Information→</p> <p>←..... Underlying Values→</p> <p>←..... Customer and Stakeholder Satisfaction→</p>			

B Performance Categories and Aspects

Measuring government's performance involves gaining an understanding of the four major accountability goals discussed below. Government leaders, managers, and employees should define performance expectations, with appropriate public input, which cover each major performance goal. Systems should be developed to measure, monitor, and continuously improve performance, and ultimately hold all government organizations and employees accountable for meeting or exceeding the expectations.

Input Economy — obtaining inputs at the most economical price. Measures of how well governments acquire products and services of reasonable quality at reasonable costs (through competitive processes, where possible).

1. Financial Measures

- A. Amount - cost of products and services
- B. Timing - financing cost

2. Physical Measures

- A. Quantity - the right amount of products and services
- B. Quality - products and services equal to or greater than specifications
- C. Timing - delivery cycles or points (JIT), maintenance cycles, replacement strategy, etc.
- D. Price - the right (competitive) price for the products or services

Process Efficiency — measures of the government's ability to produce various levels of output at stated levels of input.

- 1. Productivity (output/input)
- 2. Unit Cost (input/output)
- 3. Operating Ratios - utilization of resources, backlog, cycle time, etc.

B Performance Categories and Aspect

(continued)

Output Effectiveness — measures of the delivery of products and services to customers.

- 1. Level or quantity** - amount of products and services compared to capacity or need.
- 2. Quality** - the adherence of products and services to quality specifications.
- 3. Timeliness** - measures of timely delivery of products and services (expected finish date or ratio of on time accomplishment).
- 4. Price/cost** - the price paid by the public compared to government cost to produce.

Outcome Effectiveness — making a difference, the impact of output. Measures of change in conditions or accomplishment due to a government's delivery of products or services.

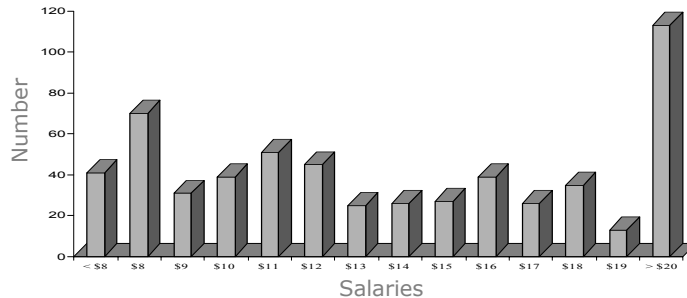
- 1. Mission and outcome goal achievement** - actual results compared to predetermined goals or benchmarks.
- 2. Financial Viability** - short and long term prospects for "breaking even" or achieving financial viability requirements.
- 3. Cost-Benefit** - cost divided by unit of benefit. A program could be beneficial for the cost but not be effective.
- 4. Cost-Effectiveness** - cost divided by unit of effect. A program which is effective for the cost is beneficial.

C Types of Performance Audits

Auditing Input Economy – how can physical inputs be obtained at the lowest price while meeting quality and timeliness requirements?

C Input Economy (financial)

Salary Distribution Among Compensated "On Call" Employees – FY08



C Types of Performance Audits

Auditing Process Efficiency – how can unit costs be decreased or productivity increased?

- **Definition:** Relationship between input and output for a product or service. Productivity is expressed as output/input.

The goal of striving for efficiency is to produce the best output (product or service) delivered on time at the minimum cost. In other words, a process is efficient when the optimal relationship between inputs and outputs is achieved.

Efficiency “operating ratios” may be used as surrogates for the input/output relationships.

C Health Clinics (financial)

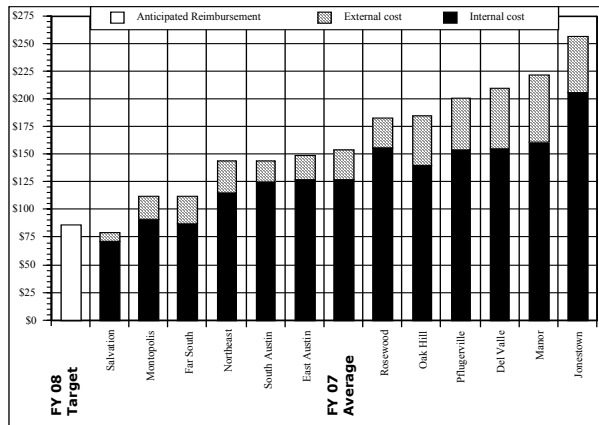
Health Clinics - Adjusted total cost comparison among clinics for billable and nonbillable encounters combined.

External Costs:

City/County corporate overhead (payroll, human resources, treasury, controller’s office, etc.) along with capital improvement projects, rent, depreciation, etc.

Internal Costs:

Physicians, nurses, medical supplies, pharmacy, etc.

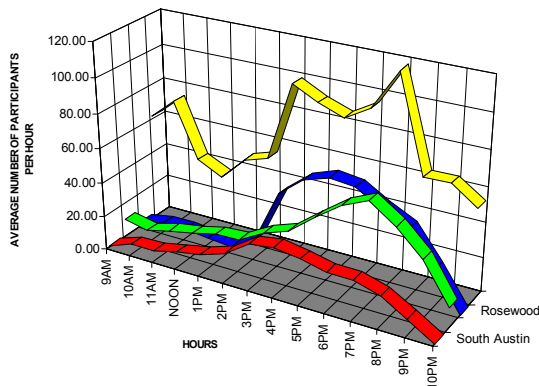


C Types of Performance Audits

- **Auditing Output Quantity** – how many outputs were delivered compared to physical capacity, financial capacity, and customer need?
- **Auditing Output Timeliness** – are outputs being delivered on time? May include elapsed time, waiting time, response time, inactive time, and on time/on schedule.

C Output Effectiveness (quantity)

Recreation Center Participants



C Output Effectiveness (Timeliness) Formulas:

Formula – There are five potential methods for measuring timeliness. The formulas are straightforward arithmetic.

- **Elapsed time**
formula: completion time - customer arrival time=elapsed time
- **Waiting time:**
formula: service start – customer arrival = waiting time
- **Response time:**
formula: service arrival time – time of call or request=response time
- **Inactive time (vs. working time):**
formula: add the time for periods when no work is done
- **On time; on schedule:**
formula: scheduled time - arrival time=on time
scheduled time – completed time=on time

C Types of Performance Audits

Auditing Output Quality – does the output meet quality requirement?

- **Accuracy** – define and meet accuracy specifications, such as accuracy in processing requests
- **Responsiveness** – willingness and readiness to understand and meet customer needs
- **Reliability** – ease of physical availability and accessibility of the service; knowledge of the service and its availability
- **Accessibility/Convenience** – politeness, respect, friendliness of contact personnel
- **Courtesy** – politeness, respect, friendliness of contact personnel
- **Credibility** – trustworthiness, believability, honesty, customer's best interests at heart
- **Utility** – meets minimum output requirements to satisfy most customers
- **Customer Satisfaction** – based on customer perceptions, does the output satisfy customer requirements?

C Auditing Outcome Effectiveness

To what extent have expected outcomes been achieved?

- **Mission and Outcome Goals Accomplishment:** Extent to which mission and outcome goals are accomplished.
 - **Financial Viability:** Short and long term prospects for 'breaking even' or remaining financially viable.
 - **Cost-Effectiveness:** Extent to which the program is effective relative to costs.
 - **Cost Benefit:** Extent to which the program is beneficial relative to costs.
 - **Impact:** Extent to which the program actually caused the outcome.
 - **Customer Satisfaction:** Extent to which customers perceive outcomes are meeting their expectations.
- (outcomes may be "intermediate" in terms of making progress toward a desired "end" outcome or final result of the program)

C Outcome Effectiveness

(mission & outcome goal achievement)

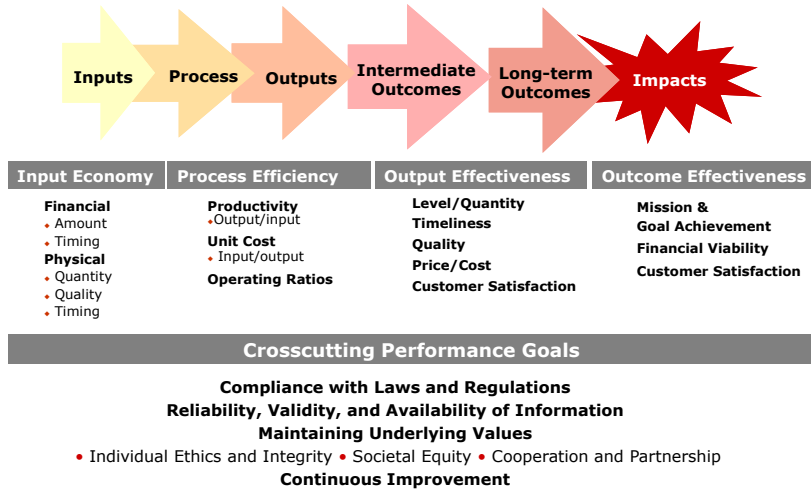
Audit Finding: DARE

DARE as implemented in AISD pilot schools is not associated with reduced contact with TCJC.

INDICATOR	DARE	NON-DARE
Number of students in sample	717	586
Percent of students with drug-related offenses resulting in contact with TCJC	4.9%	3.1%
Percent of students with non-drug offenses resulting in contact with TCJC	23.6%	18.6%

Program Performance – Risk and Vulnerability Organizational Models

D Mission



Risk and Vulnerability – Control Risk (Vulnerability) Model

E Why are Performance Goals Sometimes Not Accomplished?

- **Theoretical framework is flawed, i.e. no direct cause and relationship exists between program and desired outcomes**
- **Intervening or external variables which negate, deflect, or mask the program’s effect, i.e., GASB’s emphasis on explanatory information**
- **Program goals are unrealistic/unattainable**
- **Inputs/resources are inadequate**
- **Act of providence intercedes**
- **Management systems/processes are deficient**

E Control Risk (Vulnerability)

Control risk and risk factors may be organized according to the new COSO ERM framework. Another approach is to develop your own model based on this framework.

E The COSO ERM Framework

- **Every entity exists to provide value for stakeholders**
- **All entities face uncertainty**
- **Management must determine acceptable level of uncertainty**
- **Uncertainty presents both risk and opportunity**
- **ERM provides a framework for effectively deal with uncertainty and associated risk and opportunity**

“All entities face uncertainty, and the challenge for management is to determine how much uncertainty the entity is prepared to accept as it strives to grow stakeholder value.”

COSO
Enterprise Risk Management
Framework; Draft Version, July 2003

E Enterprise Risk Management

Enterprise risk management is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement entity objectives.

E Framework Components

The Framework Has Eight Interrelated Components



E Control Risk (Vulnerability)

In the public sector, control risk and risk factors may be organized by adapting the original COSO model and the new COSO ERM framework to the public sector environment.

Risk can be managed within tolerable upper and lower control limits by implementing controls (systems and subsystems) in the following areas:

- Policy
- Performance
- Information
- Resource management
- Control Environment

*See appendix E
See 2003 GAGAS p. 132, footnote 79.*

Risk and Vulnerability Assessments

- **Assess inherent risk**
- **Assess vulnerability**
- **Assess auditability**

Develop Audit Objectives - Rank Risk & Auditability

- **Vulnerability/Final Risk**
 - Inherent Risk
Risk without controls
 - Control Risk
risk with controls
- **Auditability**

Risk and Vulnerability Assessment Process Criteria for Assessing Inherent Risk

- ◆ Sensitivity
- ◆ Significance
- ◆ Susceptibility

For each of these three inherent risk criteria, what are examples of key risk factors that would be used to assess each of these three as high, medium, or low?

Risk/Control Relationships

Relationships Between Inherent Risks, Internal Controls and Control Risks

Inherent Risk	Internal Controls	Control Risk
High	Weak Adequate Strong	High Moderate to High Low to Moderate
Moderate	Weak Adequate Strong	Moderate to High Low to Moderate Low
Low	Weak Adequate Strong	Low to Moderate Low Very Low

Criteria for Judging Internal Controls

- **Weak** = controls missing, management unaware or management aware, but no action
- **Adequate** = controls exist but may not be best practice, or action is insufficient
- **Strong** = controls effective or best practice

Vulnerability Table

Inherent Risk

High/Low	High/High ★
Low/Low	Low/High

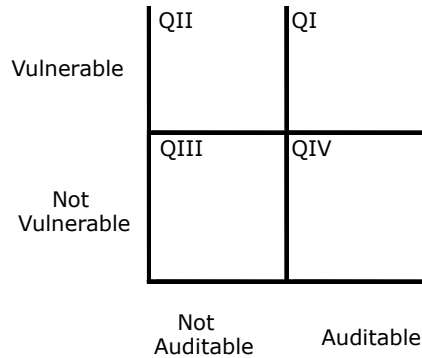
Control Risk

Auditability

Auditability is determined by:

- Audit skill
- Audit power
- Audit hours
- Audit morale
- Availability of Evidence/Information
- Timeframe

Audit Planning Grid



IIA Suggestions for Conducting a Successful Risk Assessment

Successful Risk Assessment

- Involve the audit customer in the risk assessment
- The risk assessment process must
 - produce *credible* results that are accepted by both management and auditors
 - be *timely* so that the audit process is not held back waiting for results
 - be *cost-effective* in that the resulting information is at least as valuable as the cost to obtain it



IIA Suggestions for Conducting a Successful Risk Assessment

Successful Risk Assessment (continued)

- Computers can help make the assessment process faster by handling data and calculations, but ***the key to successful risk assessment is in the auditor's understanding and identifying of risk.***
- Use intuition as a check for all risk assessments. The assessment must "make sense" to an experienced auditor.



What you want at the end of planning...

- A close-ended objective
- Sub-objectives stated in terms of the elements
- Preliminary findings to go with the sub-objectives
- Methodologies

How you get there...

Five Phases of Planning After Receiving the Audit Assignment

- I. Gather information
- II. Conduct risk and vulnerability assessment
- III. Define/refine the audit objectives
- IV. Develop the:
 - audit scope
 - audit methodologies
 - fieldwork programs
- V. Estimate the audit budget/resources

Phase I – Gather Information

Information Sources and Information Gathering

Audit Assignment Planning

Phase I — Gather Information

- Review prior reports, audit programs and other working papers.
 - Are there any open items requiring action?
- Identify significant findings and recommendations from previous audits
- Consider legal and regulatory requirements
- Review policies and procedures, operating manuals, organization charts, long- and short-range objectives
- Ask the auditee:
 - About the objectives of their program/project
 - “What keeps you awake at night?”
 - If the auditee has corrected conditions causing the significant findings

Audit Assignment Planning

Phase I — Information Sources

- Summary of expenditures from financial systems
- Control system risk assessments, especially management’s own self assessments of organizational or program risk (has management implemented COSO/ERM?)
- Agency internal audit reports
- Performance information systems and reports
- HR database
- “Renowned” experts
- Agency/industry-related internet sites
- World Future Society publications
- Audit Management
- Contact liaison
- QC reviewer

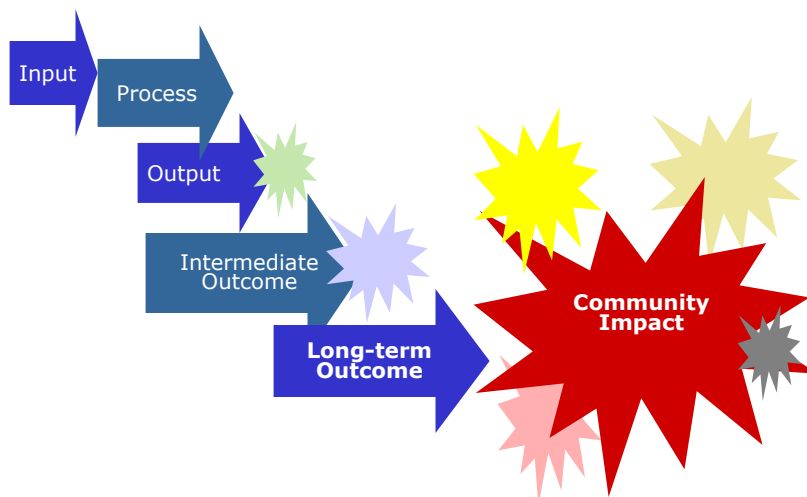
Audit Assignment Planning

Phase I — Information Sources (cont.)

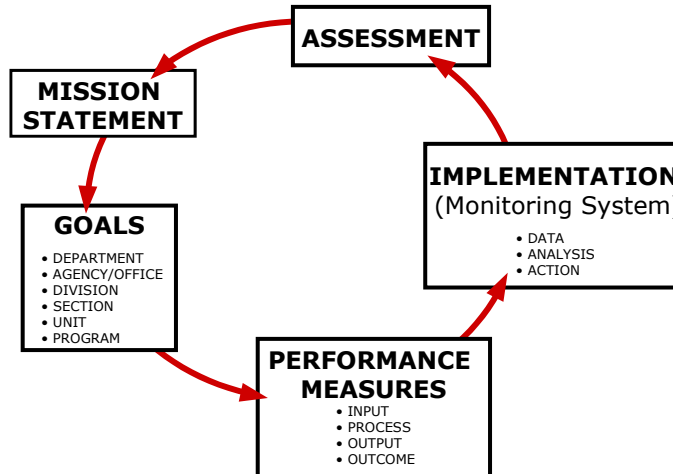
- Budget documents
- Perm files
- Results of agency and legislative contact visits
- Information research specialist
- Agency publications
- Newspaper articles
- Trade publications
- Legislative appropriation request
- Agency business/process improvement plans

Audit Assignment Planning

How Programs Work



Performance Measurement System



Phase II – Conduct Risk Assessment

Six Steps of Risk and Vulnerability Assessment

Phase II — Six Steps of Risk and Vulnerability Assessment

Step 1.

Select programs and key accountability subsystems for risk and vulnerability assessment (within the survey scope)

Phase II — Six Steps of Risk and Vulnerability Assessment

Step 2.

Assess inherent and control risks (vulnerabilities)

- Conduct on-site interviews, physical walk-through, document systems and subsystems
- Develop list of risk factors relevant to the agency or program
- Identify and assess inherent risks
- Use Assessment Guide Questionnaires or similar guidance to review/document existing management controls
- Assess control risk and vulnerability for each inherent risk
- Document risk and vulnerability assessment in the R/V matrix

Phase II — Six Steps of Risk and Vulnerability Assessment

Step 3.

Select the accountability control subsystems for which audit objectives will be developed.

Step 4.

Identify relevant performance aspects for the selected subsystems.

Step 5.

Reassess Auditability.

Phase II — Six Steps of Risk and Vulnerability Assessment

Step 6.

Summarize risk and vulnerability assessment information

- Prepare final R/V document
- Document auditability

Phase III — Define/Refine

Define/Refine Audit Objectives

Phase III — Ask the Right Question

Principles (Quality Factors) in Formulating Audit Objectives

- Phrase as precisely worded questions or as "To determine whether..."
- Eliminate ambiguous, abstract, or unfocused terms.
- Clearly identify the auditee.
- Include an identifiable, auditable performance aspect. Clearly indicate the type of performance to be audited. Separate objectives if more than one element of performance to be reviewed.
- Identify the specific elements of finding needed to meet the objective.
- Frame objectives that consider a realistic scope and methodology.
- Report must answer the audit objectives.

Phase III — Define/Refine the Audit Objective

The Audit Objective...

establishes boundaries for the audit by clearly stating what the audit is to accomplish and it identifies the subject of the audit and the performance goal.

YELLOW BOOK 7.08

The objectives are what the audit is intended to accomplish. They identify the audit subject matter and performance aspects to be included, and may also include the potential findings and reporting elements that the auditors expect to develop. Audit objectives can be thought of as questions about the program that the auditors seek to answer. (see 1.29, 1.30, 1.31, and 1.32).

Phase III — Define/Refine the Audit Objective

Change open-ended objectives into close-ended objectives.

Open-ended objectives

- Identify the subject (or what) the audit is to examine
- Are vague in defining what the audit is to accomplish

Phase III – Define/Refine the Audit Objective

Change open-ended objectives into close-ended objectives.

Close-ended objectives

- Are answerable
- Identify what the audit is to examine
- Clarify what the audit is to accomplish

Phase III – Six Steps to Redefine/Refine the Audit Objective

Step 1.

Identify the primary report *user*.

- What do they want or need to know?
- When they find out, what are they going to do?

Phase III — Six Steps to Redefine/Refine the Audit Objective

Step 2.

Understand the *subject, problem, or concern*

The audit subject will usually be:

- An organization
- A program, service, activity or function (food stamps, garbage collection, accounting, etc.)
- The accountability system subject to audit (policy management, performance management) example:
 - *Is the agency's goal setting process adequate?*
 - *Is the agency's payroll operation efficient?*
 - *Are the agency's customers satisfied with the program?*

Phase III — Six Steps to Redefine/Refine the Audit Objective

Step 3.

Decide what *performance aspect(s)* to include in the audit.

- Purpose achievement
- Cost, cost/benefit, cost recovery
- Readiness
- Quality, quantity
- Population served
- Timeliness
- Customer satisfaction
- Price of resources purchased as inputs
- Quantity of resources used
- Service accuracy, consistency, reliability, comfort

Phase III – Six Steps to Redefine/Refine the Audit Objective

Step 3. continued...

EXAMPLES:

- Is the agency's payroll operation too expensive in terms of **unit costs**?
- Is the agency's goal setting process producing goals which reflect **legislative intent**?
- Are the agency's customers satisfied with the **quality** and **timeliness** of the program's service delivery?

Phase III – Six Steps to Redefine/Refine the Audit Objective

Step 4.

Determine if the issue (performance condition) is with **processes, outputs, or outcomes.**

- All issues should be rolled-up to the control risks that allow the issue to exist.
- The control risks should be clearly linked to the inherent risks that exist in the agency or organization being audited.

Phase III – Six Steps to Redefine/Refine the Audit Objective

Step 5.

Decide what **finding elements** to develop which will then be linked to sub-objectives.

- Condition based
 - Condition
- Criteria based
 - Criteria, condition, and effect
- Cause based
 - Criteria, condition, effect, cause

Phase III – Six Steps to Redefine/Refine the Audit Objective

Step 6.

Develop **sub-objectives**.

- Sub-objectives are developed as a series of questions addressing each finding element you decided to develop. A separate question should be written for each finding element.

Phase III – Six Steps to Redefine/Refine the Audit Objective

Step 6. continued

Develop **sub-objectives**.

- Sub-objectives will:
 - Address elements of the preliminary findings
 - usually help identify the nature of the data required
 - tend to equate to major audit steps

Phase III – Six Steps to Redefine/Refine the Audit Objective

Examples of sub-objectives:

Condition based: **Response time**

CONDITION: *What is the average response time during the last three fiscal years for level one emergency calls?*

Phase III — Six Steps to Redefine/Refine the Audit Objective

Examples of sub-objectives continued:

Criteria based: **Payroll operation**

CRITERIA: *In FY 09, what were the unit costs of processing payroll in benchmark agencies?*

CONDITION: *What are the FY09 unit costs of processing payroll for the agency being audited?*

EFFECTS: *How do the auditee's FY09 unit costs of processing payroll compare to other agencies with similar payroll operations?*

EFFECTS: *What savings could be achieved if the auditee's FY09 unit cost of processing payroll were reduced to the level of the most efficient benchmark agency?*

Phase III — Six Steps to Redefine/Refine the Audit Objective

Examples of sub-objectives continued:

Cause based: **Goal setting**

CRITERIA: *What was the legislative intent provided to the agency in FY08?*

CONDITION: *What legislative intent is reflected in the agency's FY09 goals?*

EFFECT: *What is the difference between FY08 legislative intent and the agency's FY09 goals?*

CAUSE: *Does the agency's goal setting process conform to the State's guidelines for strategic planning?*

Phase III – Six Steps to Redefine/Refine the Audit Objective

Examples of sub-objectives continued:

Cause based: **Customer Satisfaction & Timeliness**

CRITERIA: *What are reasonable customer expectations for timeliness of agency service delivery?*

CONDITION: *What has been the trend in customer satisfaction with the timeliness of agency service delivery over the last five fiscal years?*

EFFECT: *What actions have customers dissatisfied with the timeliness of agency service delivery taken?*

Phase III – Six Steps to Redefine/Refine the Audit Objective

Examples of sub-objectives continued:

Cause based: **Customer Satisfaction & Timeliness**

EFFECT: *How has the agency responded to customers who were dissatisfied with the timeliness of agency service delivery?*

CAUSE: *What are the underlying factors which influence customer satisfaction with timeliness of agency service delivery?*

Phase IV — Scope and Methodology

Develop Audit Scope and Methodology

Phase IV — Develop the Audit Scope and Methodology

The Audit Scope...

defines the depth
and coverage of
audit work and any
scope limitations.

YELLOW BOOK 7.09

Scope is the boundary of the audit and is directly tied to the audit objectives. The scope defines the subject matter that the auditors will assess and report on, such as a particular program or aspect of a program, the necessary documents or records, the period of time reviewed, and the locations that will be included.

Phase IV — Develop the Audit Scope and Methodology

The Audit Methodology...
explains the techniques used when performing the audit.

YELLOW BOOK 7.10

The methodology describes the nature and extent of audit procedures for gathering and analyzing evidence to address the audit objectives. Audit procedures are the specific steps and tests auditors will carry out to address the audit objectives. Auditors should design the methodology to obtain sufficient, appropriate evidence to address the audit objectives, reduce the audit risk to an acceptable level, and provide reasonable assurance that the evidence is sufficient and appropriate to support the auditors' findings and conclusions.

Phase IV — Develop the Audit Scope and Methodology

To Select the Most Appropriate Methodology

1. Know the audit objective
2. Know the possibilities
 - Background research
 - Methodology manuals
 - Benchmarking to other audit offices
 - Experts

Phase IV — Develop the Audit Scope and Methodology

To Select the Most Appropriate Methodology (continued)

3. Consider the quality, strength, and persuasiveness of evidence
 - Standards (quantity and quality)
 - Sufficient
 - Appropriate (relevance, validity, and reliability)
 - Types
 - physical
 - documentary
 - Analytical (shifted to Appendix I in 2007 GAS)
 - testimonial

Phase IV — Develop the Audit Scope and Methodology

To Select the Most Appropriate Methodology (continued)

4. Determine the cost/benefit (Auditability)
 - Existing vs. new data
 - Previous experience using the methodology
 - Hiring an “expert”
 - Timeframe

Phase IV — How to Meet the Audit Objective

Qualitative Methods of Analysis
Quantitative Methods of Analysis

Phase IV — How to Meet the Audit Objective, Qualitative Methods

- **Surveys**
- **Focus Groups**
- **Content Analysis**
- **Trained Observer**
- **Expert Judgment**
- **Document Examination**
- **Case Studies**

Phase IV — How to Meet the Audit Objective, Quantitative Methods

- Variance/Comparative Analysis
- Ratio Analysis
- Regression
- Time-series
- Interrupted Time-series
- Cost-benefit
- Cost-effectiveness
- Activity-based Costing

Phase IV — Another Perspective: Data Gathering and Analysis Methodologies

Gathering data:

- Sampling
- Data retrieval
- Questionnaires/ surveys
- Interviews

Analyzing data:

- Case studies
- Content analysis
- Ratio analysis
- Trend analysis
- Flowcharting
- Cost/benefit analysis
- Hypothesis testing
- Inferential statistics

Phase IV — Another Perspective: Other Analytical Techniques

- Data envelopment analysis
- Discriminate analysis
- Expected value
- Game theory/decision theory
- Goal programming
- Linear programming
- Operations research
- Probability theory
- Queuing theory
- Sensitivity analysis
- Systems analysis

Phase IV — Questions to Consider about Methodologies

- What does the customer want to know? (audit objective)
- What do we need to answer the question? (info required)
- Where are we going to get it? (info source)
- How are you going to get it? (data collection method)
- What will you do with it once you have it? (data analysis methods)
- What can't you do with the information? (limitations)
- What can you say with the information you gather? (what the analysis will allow you to say)

Audit Assignment Planning

Phase IV — Contents of the Audit Fieldwork Program

- Audit objective(s) and sub-objective(s)
- Scope
- Tasks to accomplish objectives
- Sampling methodologies
- Data collection and analysis methodologies
- Data sources, documents or systems
- Documentation of audit supervisory approval

Audit Assignment Planning

Phase V — Budget

Estimating Audit Budget/Resources

Phase V – Estimating Audit Budgets

Create an audit budget and allocation of resources

- **Consider:**
 - Time
 - Dates
 - Staff
 - Work of other auditors
 - Work of experts
- **Budget and time estimation techniques include parametric estimating (the 'bucket method') and expert guessing (modified wide-band Delphi).**

Checklist

Best Practices Checklist for Audit Planning

Best Practices

Best Practices Checklist for Audit Planning

Develop and obtain concurrence on a written plan to direct the planning phase.

The plan contains:

- Tasks to accomplish background research
- Risk assessment
- Development of:
 - Objectives, scope and methodology
 - Preliminary findings



Ensure audit management actively and constantly participates and continually raises questions

After considering various methodologies, select ones that will fully accomplish the audit objectives at the least cost

Best Practices

Best Practices Checklist for Audit Planning

Identify barriers to implementing the methodology including location, availability, and reliability of information and information sources

Periodically brief internal and external clients about objectives, messages and potential outcomes

Proactively ensure client interest in the project outputs

- Be responsive to the requestor's needs
- Help potential clients understand the usefulness and benefits of the project

Best Practices

Best Practices Checklist for Audit Planning

Review generally accepted government auditing standards and understand/document how and which standards will be applied during the assignment

Provide high quality, timely, and documented planning phase output reviews

Ensure everyone involved in the assignment understands and agrees with their roles and responsibilities

Sequence activities and organize work around expected results

Start visualizing potential outputs and outcomes when you start the project

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Best Practices

Best Practices Checklist for Audit Planning

Make explicit the linkage between audit objectives and finding elements through sub-objectives

Identify potential scope limitations

If original data must be collected, design the data collection instrument during the planning phase and pre-test the instrument

Link the methodology to the fieldwork program by specifying the evidence to be collected and analyzed to complete preliminary findings and answer audit objectives/sub-objectives

Consider when the customer needs the information when deciding on a communication product

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Best Practices

Best Practices Checklist for Audit Planning

Understand the motives/positions of the various players including experts, competitors, clients, and stakeholders

Conclude the planning phase with a “meeting of the minds”.

Agree on the:

- Criteria
- Preliminary conditions
- Information constraints
- Scope limitations
- Risk assessment conclusions
- The objectives, scope, and methodology
- Sufficient information to develop and audit fieldwork program.

Conclusion

- ◆ Review questions asked
- ◆ Used Checklist to assess current audits
- ◆ Course Evaluations