



# Information Services Department Performance Audit Survey

## Final Report

December 2, 2004



STERLING  
ASSOCIATES, LLP.

# Scope and Objectives

## ➔ Scope

- ✎ The scope of this review included Pierce County information technology, that is, the functions and services provided by the Information Services Department (ISD) to all County departments.

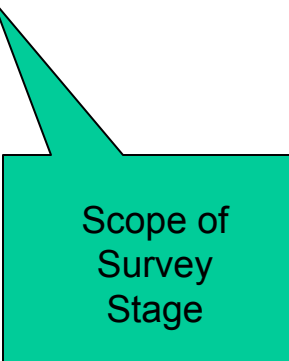
## ➔ Objectives

- ✎ To conduct a performance audit survey of the County's information technology in preparation for a comprehensive study in 2005, in accordance with the County's performance audit Charter mandate
- ✎ To determine focus areas that would benefit from a performance audit
- ✎ To identify potential performance audit criteria
- ✎ To estimate the costs and benefits of a full performance audit
- ✎ To identify findings, conclusions and recommendations
- ✎ To present the results to the Performance Audit Committee



# Performance Audit Cycle

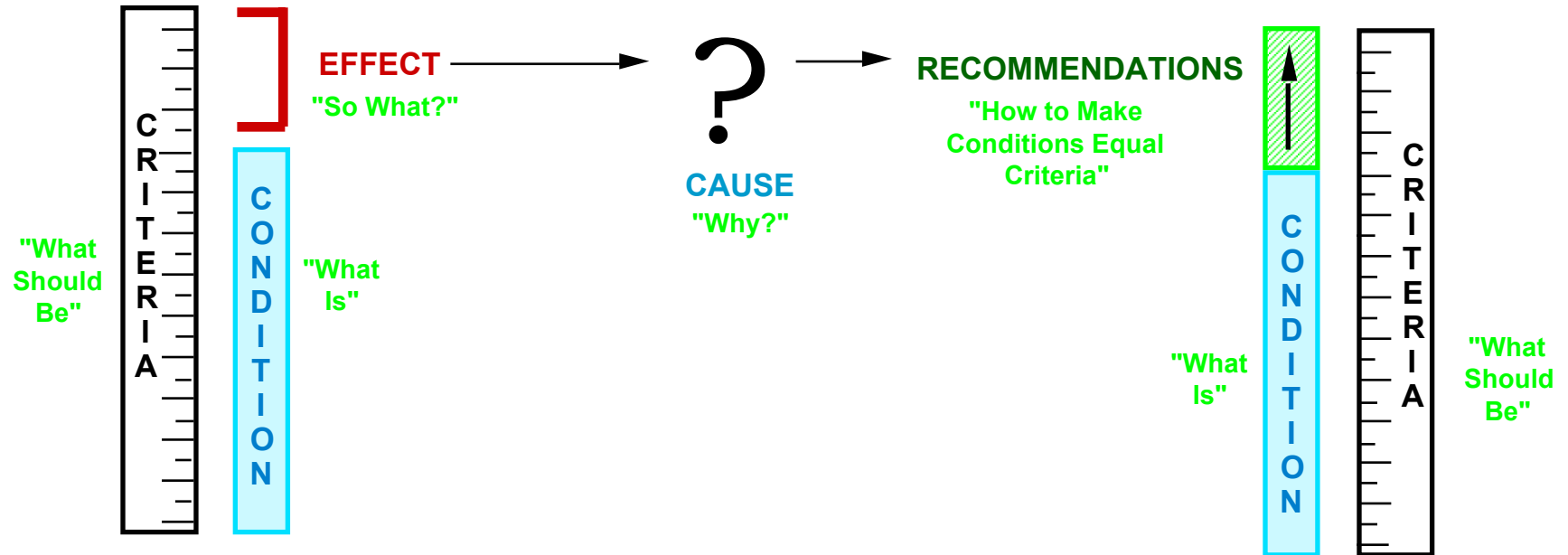
- ➔ Step 1 – Determine if a full performance audit is warranted
- ➔ Step 2 – Identify scope
- ➔ Step 3 – Select audit criteria
- ➔ Step 4 – Prepare audit plan
- ➔ Step 5 – Conduct field work
- ➔ Step 6 – Analyze conditions against the criteria
- ➔ Step 7 – Identify exceptions to criteria
- ➔ Step 8 – Assess “materiality” of exceptions
- ➔ Step 9 – Diagnose cause(s) of exceptions
- ➔ Step 10 – Develop recommendations to bring conditions up to criteria
- ➔ Step 11 – Prepare report of findings and recommendations
- ➔ Step 12 – Present report



Scope of  
Survey  
Stage



# Performance Audit Principles


















# Approach

- ➔ The performance audit survey stage was conducted in compliance with Governmental Audit Standards.
- ➔ Relevant background information was reviewed:
  - ✎ County-wide Strategic Information Technology Plan (SITP)
  - ✎ Departmental Strategic Information Technology Plans
  - ✎ Information Services Department:
    - Organization chart
    - Policies, standards and procedures
    - Budget
    - Budget performance measures
    - Product and services descriptions
    - Sample project feasibility study
    - GIS hardware and software Infrastructure report
    - Systems development principles
    - Mission driven budget objectives
  - ✎ Gartner Group:
    - 1999 Total Cost of Ownership Recommendations
    - 2003 Rapid Assessment for Total IT Expenditure—Final report



# Approach (continued)

## ➔ Conducted interviews:

-  Diane Braaten, County Executive's Office
-  Terry Hale, Information Services
-  Lew Sellers, Information Services
-  Larry Gezelius, Information Services
-  Betsy Sawyers, Human Resources
-  Nancy Wussow, Human Resources
-  Patrick Kenney, Budget and Finance
-  Steve Bailey, Emergency Management
-  Ken Madsen, Assessor-Treasurer
-  Kathy Fewins, Assessor-Treasurer
-  Chuck Kleeberg, Planning and Land Services
-  Gordon Aleshire, Planning and Land Services
-  Ron Klein, Communications
-  Dan Erker, Juvenile Court Services
-  Terry Dacca, Prosecuting Attorney's Office
-  Irene Bauer, Prosecuting Attorney's Office
-  Fran Lewis, Human Services
-  Mark Crawford, Human Services
-  Andra Motyka, Superior Court
-  Chuck Gay, County Clerk's Office
-  Kevin Stock, County Clerk's Office
-  Brian Ziegler, Public Works
-  Tony Tipton, Public Works



## Approach (continued)

- ➔ Preliminary results were shared with Performance Audit Committee on August 19, 2004
  - ✎ Interview highlights were shared
  - ✎ Performance audit scope options were presented
  - ✎ Potential audit criteria were presented and discussed
- ➔ Performance Audit Committee directed:
  - ✎ Additional interviews
  - ✎ An assessment of an ISD performance audit “return on investment”



# Findings

## ➔ The following major themes surfaced during the survey process:

- ✎ The Information Services Department's director and management team have provided effective information technology direction and leadership:
  - Forward looking
  - Builds partnerships with departments
  - Results focused
  - Adaptive
  - Willingness to examine themselves and make improvements
- ✎ The user departments gave high praise to the staff in the Information Services Department:
  - Understand the departments' business processes
  - Work well with department staff
  - Personable
  - Responsive to departments' needs
  - Resourceful
  - Committed
  - Technically sound and reliable
- ✎ The County has received recognition and awards for its systems:
  - LINX
  - GIS
  - POPS
- ✎ The County's systems and network are reliable and fast.
- ✎ Virus prevention and correction measures have been effective.



# Findings (continued)

## ➔ Major themes:

- ✎ There is no integration between the Strategic Information Technology Plans and the County's budgeting cycles.
- ✎ Many expressed frustration with:
  - Understanding their ISD charges
  - Estimating future costs
  - How to control ISD charges
  - The “system development hours allocation” process
  - The absence of an equipment replacement fund
- ✎ Most indicated they could use more ISD staff support.
  - High quality
  - Not enough capacity
  - Understand budget constraints
- ✎ Standardization has helped the County.
  - Systems and services reliability
  - Avoided costs by implementing Gartner Group's recommendations
- ✎ Some believe they could save money or be more effective by not following the County's standards.
- ✎ ISD has moved away from large complex projects to smaller modular development efforts.



# Findings (continued)

## ➔ Major themes:

- ✎ Unlike other governmental jurisdictions, the County has not had catastrophic system development failures.
  - Risk management focus: “We don’t have to be first” philosophy
  - Thorough business analysis and understanding
  - Close working relationship with departments
  - Strong emphasis on system testing and user acceptance
- ✎ There is a bias toward building as opposed to buying commercial off-the-shelf software.
  - Some departments have purchased software
  - Others are pleased with custom developed software that reflect their unique business requirements
- ✎ System development projects have a reputation for:
  - Taking much longer than originally planned
  - Costing more than originally estimated
- ✎ The software development process is not standardized.
- ✎ Project management practices are not formal:
  - No standardized project plans
  - Project status is reported informally
  - Issues are managed informally
- ✎ “Should we be outsourcing more?”



# Findings (continued)

## ➔ Major themes:

- ✎ The Strategic Information Technology Plan does not include a “human capital” component to ensure the appropriate staff and skill levels are available to implement the plan.
- ✎ More attention is needed on helping individual departments with the development of their strategic information technology plans.
- ✎ The GIS group is very entrepreneurial and effective in leveraging the system to serve multiple departments.
- ✎ Effectively managing County-wide data is difficult due to the different business lines represented in the County.
- ✎ Sharing applications and technologies, like LINX imaging, have helped departments take advantage of the investments made in other departments.
- ✎ More attention is needed on systems disaster recovery.



# Is a Full Performance Audit of ISD Warranted?

## ➤ Benefits:

- ✎ Meets requirement to conduct a performance audit affecting all County departments.
- ✎ Provides an opportunity to look critically at a function that is vital to the entire County.
- ✎ Identifies improvement opportunities.
- ✎ Given the importance of information technology to the County, an audit gives policymakers an opportunity to learn about information technology management and issues.
- ✎ Provides an independent assessment of efficiency and effectiveness.

## ➤ Disadvantages:

- ✎ The performance audit survey did not identify significant short-comings.
- ✎ In fact, the audit survey identified a number of outstanding achievements.
- ✎ A comprehensive performance audit can be very time consuming and expensive.
- ✎ Other departments might benefit more from a performance audit than ISD.

## ➤ Options Evaluated:




- ✎ Three scope options were presented to the Performance Audit Committee:
  - Option #1 – Audit performance against the Strategic Information Technology Plan
  - Option #2—Audit performance against adopted performance measures
  - Option #3—Audit performance against the Software Engineering Institute’s “Capability Maturity Model”
- ✎ The Performance Audit Committee asked for more information:
  - Additional perspectives from other departments
  - A “return on investment” analysis for moving forward with a full performance audit
  - Recommendation for next steps



# Is a Full Performance Audit of ISD Warranted? (continued)

## ➔ Option #1 – Audit performance against the Strategic Information Technology Plan

### Benefits:

- ISD’s performance would be reviewed against the specific strategies in the plan:
  -  Results
  -  Impacts
  -  Efficiencies
- Tactical plans would be evaluated to determine how they support each strategy.
- Short-comings would be evaluated for improvement opportunities.
- Planning improvement opportunities could be identified.
- Improved linkages to the budgeting process could be explored in detail.
- Greater “policy level” attention could be given to county-wide IT opportunities.

### Costs:

- Performance audit fees to conduct a performance audit against the Strategic Information Technology Plan: **\$50,000**.
- Approximately 150 county management and staff hours over a four month period would be needed to support the audit.
- Potential hard dollar savings would be negligible.
- Additional processes to implement recommendations could siphon management and staff focus from other high value needs.



# Is a Full Performance Audit of ISD Warranted? (continued)

## ➔ Option #2—Audit performance against adopted performance measures

### Benefits:

- Specific audit questions pertaining to this plan might include:
  - ▣ How has the Information Services Department performed on these objectives?
    - ♦ Results
    - ♦ Impacts
    - ♦ Efficiencies
- What other performance metrics does ISD use? If so, how has ISD performed against these measures?
  - ▣ Customer service
  - ▣ Project management
  - ▣ Service levels
    - ♦ Reliability
    - ♦ Availability
  - ▣ Return on investment – cost/benefit
  - ▣ Total cost of ownership
- If performance has fallen short, what were the contributing factors?
- Are there additional performance metrics that would benefit the County's information technology program?


### Costs:

- Performance audit fees to conduct a performance audit against adopted performance measures: **\$20,000.**
- Approximately 40 management and staff hours over a three month period would be needed to support the audit.
- Potential hard dollar savings would be negligible.
- Results could be achieved without a performance audit:
  - ▣ Simple report request to ISD from the Council
  - ▣ A series of questions during budget hearings



# Is a Full Performance Audit of ISD Warranted? (continued)

## ➔ Option #3—Audit performance against the Software Engineering Institute’s “Capability Maturity Model”

 The Software Engineering Institute of Carnegie Mellon University has developed a framework for evaluating an organization’s “maturity” in the development and management of information systems.

### Benefits:

- The framework titled the “Capability Maturity Model” (CMM) represents a set of generally accepted principles and practices.
- The CMM provides yardsticks against which it is possible to judge, in a repeatable way, the maturity of an organization’s software development and maintenance processes and compare them to practices found in industry and other governmental jurisdictions.
- The CMM can also be used by an organization to plan improvements to its software development and maintenance processes.
- Specific systems development improvement opportunities could be identified.

### Costs:

- Performance audit fees to conduct a performance audit against the Capability Maturity Model: **\$75,000 - \$100,000.**
- Approximately 160 management and staff hours over a six month period would be needed to support the audit.
- Potential hard dollar savings would be negligible.
- In the short-term, costs would likely increase due to additional processes, training and systems to implement recommendations.



# Conclusions

- ➔ A full performance audit of the Information Services Department would not be cost-effective at this time.
- ➔ Pierce County has made substantial investments in information technology over the years.
  - ✎ These investments have paid substantial dividends in terms of:
    - Improving responsiveness to the public,
    - Enhancing the efficiency of services,
    - Integrating numerous county functions,
    - Ensuring accountability, and
    - Raising the County's reputation among peers.
- ➔ The Information Services Department receives high marks from client departments in terms of leadership, innovation, customer service, and reliability.
- ➔ Improvements can be made:
  - ✎ Integrated strategic information technology planning and budgeting
  - ✎ Project management disciplines, practices, status reporting and controls
- ➔ We believe the County's "audit dollar" may yield higher results if focused on departments with notable performance issues.



# Recommended Next Steps

## ➔ Recommendation #1: *Do not conduct a full performance audit of Pierce County's information technology*

- ✎ The results of the audit survey do not provide sufficient grounds to merit a full performance audit at this time.
- ✎ We believe the County would receive greater value from performance audits of other departments, programs, functions or issues.
- ✎ This recommendation is consistent with the policies, guidelines and practices used by the Government Accountability Office (GAO) for evaluating the merits of conducting performance audits.

## ➔ Recommendation #2: *Request the Information Services Department to address the improvement opportunities identified during the performance audit survey.*

- ✎ This should include a corrective action plan and an implementation status reporting process back to the Performance Audit Committee starting in 2005.

## ➔ Recommendation #3: *Request the Budget and Finance Department to explore means for integrating strategic information technology plans and budgeting processes.*

- ✎ This should include: (a) process improvements, (b) performance reporting and accountability improvements, and (c) implementation status reporting back to the Performance Audit Committee.

