



Lavois Campbell, CIA, CISA, CFE, CGA
Chief Audit Executive

April 2025

DeKalb County Government
County-wide

APPLICATION CHANGE MANAGEMENT AUDIT

FINAL REPORT

Audit Report No. IA-2024-0208-IT

REDACTION NOTICE

Sections of this audit report have been redacted to protect information, "which if made public could compromise security against sabotage, criminal or terroristic acts."

O.C.G.A § 50-18-72(25)(A).



APPLICATION CHANGE MANAGEMENT AUDIT REPORT NO. IA-2024-0208-IT

FINAL

HIGHLIGHT SUMMARY

Why We Performed the Audit

In accordance with the Office of Independent Internal Audit (OIIA) Annual Audit Plan, we conducted an Application Change Management audit. The purpose of this audit was to assess the County's application change management process and provide management with assurance that the process is controlled, monitored, and in compliance with good practices.

National Institute of Standards and Technology (NIST) SP 800-53 recommends that organizations develop, document, and implement a configuration and change management plan for their systems that addresses roles, responsibilities, and configuration management processes and procedures. To align with NIST recommendations and to enable institutions manage changes effectively in their environment, most organizations including DeKalb County, have developed policies and procedures to guide the process and ensure all changes are managed through a structured approach to avoid undesirable consequences.

Periodically, these organizations conduct a review of their change management process to provide management with the assurance that the process is controlled, monitored, and in compliance with good practices as failure to implement good change management practices could lead to system or application failure resulting in a lack of data/system availability, unauthorized changes, unapproved and untested changes being migrated to production, non-compliance with requirements, segregation of duties (SOD) conflict, implementing changes that do not align with organizational business strategy among others.

How We Performed the Audit

The audit focused on the Department of Innovation and Technology's (DoIT) change management processes. Our methodology included, but was not limited to, the following:

- Researched related best practices.
- Reviewed County's change management policies and procedures.
- Selected and tested a sample of application change request tickets.
- Conducted a walkthrough of the application change management process
- Reviewed applicable documentation and information.
- Interviewed appropriate County personnel in the Department of Innovation and Technology (DoIT).

Background

DeKalb County in the delivery of effective services and programs to its citizens has developed configuration and change management policies and procedures which state that the security program shall include a configuration management process, determinations of the impact of changes to information systems and operations, monitoring, ongoing security control assessments, and reporting the security state of information systems. The policy also states that changes to DeKalb County information systems and network architecture, such as operating systems, hardware, network devices, and applications are subject to DoIT Change Management processes and procedures. County information systems are managed by approved configuration and change management principles throughout the design, development, implementation, and operations of information systems.

What We Found

The audit noted that DoIT has developed and documented change management policies and procedures to guide the application change management process and utilizes the ManageEngine change management system to manage the change.

Audit Findings

1. Change Management Policies and Procedures Need Improvement
2. Incomplete Documentation for Change Request
3. Testing, Validation, and Change Management Oversight Need Improvement
4. Inadequate Risk and Impact Analysis Before Migration to Production Environment.
5. Change Approval Process Needs Improvement
6. Monitoring of Application Changes Needs Improvement

What We Recommend

We recommend that the DoIT management address the control process deficiencies identified in this report.

How Management Responded

Management agrees with the findings of the report and have action plans to address them October 2025.



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implementation.

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2. [Redacted] [Yellow bar]

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Why this Audit Was Performed

The audit was performed to determine that the County has a structured application change management process to help ensure that only authorized and approved changes, with mitigated risks to application integrity, security, and effectiveness, are performed on DeKalb County applications.

Our Scope, Objectives, and Methodology

The scope of the engagement focused on the County's application changes and controls from January 1, 2023, to December 31, 2023. Access control review was excluded and will be considered in future information technology general controls (ITGC) audits.

The objective was to assess the County's application change management process to determine whether it is controlled, monitored, and compliant with best practices, such as the Information Systems Audit and Control Association (ISACA), Information Technology Infrastructure Library (ITIL) Change Management best practices, and NIST SP 800-53.

Our audit procedures included discussions with DoIT management staff and transaction tests to assess the effectiveness of the application change management processes.

AUDIT RESULTS

We noted that DoIT had documented Change Management Policies and Procedures to guide the application change management process. [REDACTED]

However, the audit identified opportunities for improvement in the application change management process. This report outlines the detailed findings and corresponding recommendations.

Finding 1: Change Management Policies and Procedures Need Improvement

We reviewed the following Change Management-related policies and procedures developed by the DoIT, as well as best practices, to determine if there were any gaps that should be addressed.

- [REDACTED]



- [REDACTED]
 - [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
 - [REDACTED]
 - [REDACTED]

Recommendations:

We recommend that DoIT management [REDACTED]

- [REDACTED]
 - [REDACTED]
- [REDACTED]
 - [REDACTED]
- [REDACTED]
 - [REDACTED]
- 4. [REDACTED]
 - [REDACTED]
- [REDACTED]
 - [REDACTED]
- [REDACTED]
 - [REDACTED]
- [REDACTED]
 - [REDACTED]



7. [REDACTED]

Management Response (Department of Innovation & Technology Management):

Management Agreement	Description of Management's Action Plan to Address Finding	Estimated Timeline to Implement Action Plan
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

Finding 2: Incomplete Documentation for Change Request.

The DoIT Change Management [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]
------------	------------

[REDACTED]

[REDACTED]



[REDACTED]

During the audit, we [REDACTED]
[REDACTED]

We identified [REDACTED]. Specifically:

1. [REDACTED]
[REDACTED]

DoIT explained during the walkthrough that [REDACTED]
[REDACTED]

[REDACTED]

In addition, [REDACTED], including

- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

[REDACTED]



[REDACTED]

Recommendations:

We recommend that [REDACTED] help ensure that:

1. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

Management Response (Department of Innovation & Technology Management):

Management Agreement	Description of Management’s Action Plan to Address Finding	Estimated Timeline to Implement Action Plan
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[illegible]



4. [REDACTED]
- 1. [REDACTED]
 - 2. [REDACTED]
 - 3. [REDACTED]
 - 4. [REDACTED]
 - 5. [REDACTED]
 - 6. [REDACTED]
 - 7. [REDACTED]
 - 8. [REDACTED]

[REDACTED]

Recommendations:

To address these findings, we recommend DoIT management implement procedures to address the following system and process enhancements:

1. [REDACTED]



3. [REDACTED]

By implementing these recommendations, DoIT can strengthen compliance with documented policies, enhance accountability, and reduce risks associated with the change management process.

Management Response (Department of Innovation & Technology Management):

Management Agreement	Description of Management's Action Plan to Address Finding	Estimated Timeline to Implement Action Plan
<div><div></div><div></div></div>	[REDACTED]	[REDACTED]
Reason For Disagreement:		

Finding 4: Inadequate Risk and Impact Analysis Before Migration to Production Environment.

[REDACTED]



From the 15 samples

Recommendations:

We recommend that DoIT management should:

1.

Management Response (Department of Innovation & Technology Management):

Management Agreement	Description of Management's Action Plan to Address Finding	Estimated Timeline to Implement Action Plan
<div><div></div><div></div></div>		
<div></div>		



Finding 5: Change Approval Process Needs Improvement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

1. [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]

Our observations were likely due to the following:

[REDACTED]

To address these gaps, we recommend that DoIT management implement the following

Management Agreement	Description of Management's Action Plan to Address Finding	Estimated Timeline to Implement Action Plan
<div> <div></div> <div></div> </div>		
Reason For Disagreement:		

During our walkthrough, we

During our walkthrough, we

To address these gaps, we recommend DoIT management:

- 1.

Management Agreement	Description of Management's Action Plan to Address Finding	Estimated Timeline to Implement Action Plan
<div> <div></div> <div></div> </div>		
Reason For Disagreement:		



APPENDICES

Appendix I – Purpose, Scope, and Methodology

Purpose

The purpose of the audit was to assess the County's application change management process and provide management with assurance that the process is controlled, monitored, and in compliance with good practices.

Scope and Methodology:

The scope of our audit focused on the application change management process from January 1, 2023, to December 31, 2023.

Our methodology included but was not limited to the following:

- Researched related best practices.
- Reviewed County's change management policies and procedures.
- Selected and tested a sample of application change request tickets.
- Conducted a walkthrough of the application change management process
- Reviewed applicable documentation and information.
- Interviewed appropriate County personnel in the Department of Innovation and Technology (DoIT).



Appendix II – Management Response

DEPARTMENT OF
INNOVATION & TECHNOLOGY



OFFICE OF CIO & DIRECTOR
WILLIAM E. JONES

March 7, 2025

Lavois Campbell
Chief Audit Executive
Office of Independent Internal
Audit 1300 Commerce Drive,
Suite 300
Decatur, Georgia 30030

RE: **Management Response to Applications Change Management Audit Report**

Dear Mr. Campbell:

In accordance with DeKalb County, Georgia – Code of Ordinances / Organizational Act Section 10A- Independent Internal Audit, this is our response to the audit named above provided in this document. As required by the ordinance, our response includes 1) a statement regarding our agreement or disagreement along with reasons for any disagreement, 2) our plans for implementing solutions to issues identified, and 3) the timetable to complete such plans.

If you have any questions about this response, please contact William E. Jones, CIO /Director of Innovation & Technology and Felecia Green, Deputy Director/CIO.

Sincerely,

William E Jones

Signed by: William E Jones
Date & Time: 07 Mar, 2025 15:47:24 -05

William E. Jones
CIO / Director of Innovation & Technology

Acronyms and Abbreviation

ITIL: Information Technology Infrastructure Library

A series of 15 horizontal black bars of varying lengths, representing a list of redacted items. The bars are arranged vertically, with the longest bars at the top and the shortest at the bottom. The lengths vary significantly, with some bars spanning almost the entire width of the page and others being much shorter.



DISTRIBUTION

Action Official Distribution:

William Jones, CIO, Department of Innovation & Technology

Felecia Green, Deputy CIO, Department of Innovation & Technology

Statutory Distribution:

cc. Lorraine Cochran-Johnson, Chief Executive Officer

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Gloria G. Gray, Audit Oversight Committee

Harold Smith, Audit Oversight Committee

Dr. G. Leah Davis, CEO's Chief of Staff

Zachary L. Williams, Chief Operating Officer/ Executive Assistant



PROJECT TEAM

This report was submitted by:

Julie Ikioda
Julie Ikioda, CISA, PMP
IT Internal Auditor, Senior
Office of Independent Internal Audit

04/03/25

Date

This report was reviewed by:

Maxwell Addico
Maxwell Addico, MBA, CISA, ISO/IEC 27001 LA
IT Audit Manager
Office of Independent Internal Audit

04/03/25

Date

The report was approved by:

Lavois Campbell
Lavois Campbell, CIA, CISA, CFE, CGA
Chief Audit Executive
Office of Independent Internal Audit

04/03/25

Date



STATEMENT OF ACCORDANCE

Statement of Accordance

The mission of DeKalb County is to make the priorities of the citizens of DeKalb County; the priorities of County government - by achieving a safer DeKalb, building stronger neighborhoods, creating a fiscally accountable and more efficient county government, and uniting the citizens of DeKalb County.

The mission of the Office of Independent Internal Audit is to provide independent, objective, insightful, nonpartisan assessment of the stewardship or performance of policies, programs, and operations in promoting efficiency, effectiveness, and integrity in DeKalb County.

This performance audit was prepared pursuant to DeKalb County, Georgia – Code Ordinances/Organizational Act Section 10A- Independent Internal Audit. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

This report is intended for the use of the agency to which it was disseminated and may contain information that is exempt from disclosure under applicable law. Do not release without prior coordination with the Office of Independent Internal Audit.

Please address inquiries regarding this report to the Office of Independent Internal Audit at 404-831-7946.