

FOLLOW-UP REPORT

Denver County Court ***IT General Controls***

JUNE 2021



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City and County of Denver



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AUDITOR'S LETTER

June 3, 2021

In keeping with generally accepted government auditing standards and Auditor's Office policy, as authorized by city ordinance, the Audit Services Division has a responsibility to monitor and follow up on audit recommendations to ensure city agencies address audit findings through appropriate corrective action and to aid us in planning future audits.

In our follow-up effort for the Denver County Court "IT General Controls" audit report issued in August 2018, we determined the court fully implemented one recommendation and did not implement another it agreed to in the original audit report. Although court officials disagreed with a third recommendation, we learned they did take some action to address the concerns.

However, despite the court's efforts, auditors determined the risks associated with the audit team's initial findings have not been fully mitigated. As a result, the Audit Services Division may revisit these risk areas in future audits to ensure the city takes appropriate corrective action.

The Highlights page in this report provides background and summary information about the original audit and the completed follow-up effort. Following the Highlights page is a detailed implementation status update for each recommendation.

I would like to express our sincere appreciation to the personnel at Denver County Court who assisted us throughout the audit and the follow-up process. For any questions, please feel free to contact me at 720-913-5000.

Denver Auditor's Office

A handwritten signature in black ink, appearing to read "Timothy M. O'Brien".

Timothy M. O'Brien, CPA
Auditor



Denver County Court IT General Controls

JUNE 2021

Objective

The objective of the audit was to evaluate the operating effectiveness of the internal controls for Denver County Court’s information technology.

Background

Denver County Court is Denver’s judicial branch of government and handles a variety of cases including civil, small claims, traffic, and criminal cases. Denver County Court’s IT department manages and maintains Denver County Court’s IT infrastructure, systems, and data, all while providing 24/7 helpdesk support.

ORIGINAL REPORT HIGHLIGHTS

We identified opportunities to improve the information technology general controls in place at Denver County Court. Our audit included a review of the controls over user access, backup and recovery, change management, and those at the data center.

We noted opportunities for improvement in three areas. One, the existing policies and procedures could be strengthened by updating them to reflect current practices and to more clearly identify the existing control framework. Two, the data center environmental controls were lacking, putting vital court data at risk for destruction in the event of water or fire damage. Finally, the backup processes were not based on best practices, putting critical court data at risk for loss or theft.

Why This Matters

Denver County Court depends on its information technology team to support all its departments’ needs, independent from the city’s Technology Services agency. But without effective IT general controls and updated policies and procedures that reflect current practices the Denver County Court information technology team may not be able to meet the court’s needs. This could put the court at risk for data destruction, loss, or theft.



1

FULLY IMPLEMENTED



0

PARTIALLY IMPLEMENTED



1

NOT IMPLEMENTED



1

DISAGREED; NO FOLLOW-UP

June 3, 2021

Action Since Audit Report

IT General Controls

3 recommendations proposed in August 2018



**FULLY
IMPLEMENTED**

1



**PARTIALLY
IMPLEMENTED**

0



**NOT
IMPLEMENTED**

1



**DISAGREED;
NO FOLLOW-UP**

1

Denver County Court fully implemented one recommendation made in the original audit report, but another has yet to be fully implemented or acted upon.

The court's information technology team implemented a cloud strategy for backups, which mitigated one risk we identified during the original audit. Since our recommendation, backups are occurring more frequently and retention has improved.

However, the team did not develop and implement all the policies and procedures called for by another recommendation. Despite the court agreeing to implement this recommendation, the presiding information technology director retired in November 2019 without updating policies and procedures. An employee was promoted to fill the position in early 2020 but they told us no policies and procedures were revised or updated. During the original audit, court officials estimated they would implement the recommendation by June 1, 2019, but they failed to implement any significant changes for over two years.

Although court officials disagreed with our third recommendation — to relocate their data center — court staff have collaborated with Technology Services to find a new location for additional computer equipment.

Finding | The Internal Control Structure of Denver County Court's Information Technology Systems and Data Should Be Improved

Recommendation 1.1

UPDATE EXISTING POLICIES AND PROCEDURES USING THE NIST

FRAMEWORK – The Denver County Court's IT department should update its IT policies and procedures for user access and change management based on the National Institute of Standards and Technology's 800-53 standard and the system backup policies and procedures based on the National Institute of Standards and Technology's 800-34 standards as soon as possible. These updated policies and procedures should address the following areas:

1. Reflect the current operational practices.
2. Clearly identify each control in place.
3. Specify who performs each control.
4. Describe how the performance of each control should be documented.
5. Establish the retention period for control documentation.



**NOT
IMPLEMENTED**

AGENCY ACTION

Original target date for completion: June 1, 2019

In response to the original audit, Denver County Court's information technology team committed to updating their existing policies and procedures using the National Institute of Standards and Technology's framework. However, the presiding information technology director retired in November 2019 without updating the policies and procedures. An employee was promoted to fill the position in early 2020 but they told us that, as of early 2021, no policies and procedures were revised or updated in accordance with the audit recommendation.

We agreed to postpone our follow-up work until the first quarter of 2021 to allow the new director time to address the challenges of the pandemic: helping employees work remotely, determining how to safely provide core services, and complying with health orders, while meeting legal and constitutional mandates.

However, when audit work resumed, the director told us that while court officials had been evaluating the federal standards, the court is also subject to Criminal Justice Information System standards for security and encryption and procedures must also support this compliance.

The court's information technology team has begun updating policies and creating new checklists to ensure consistent procedures. For example, the new information technology director provided us with documented checklists and a policy draft relating to user access reviews and password security.

Nonetheless, the team made limited progress on updating gaps in existing information technology policies and procedures for user access and change management despite having more than two years to do so. Therefore, we consider this recommendation not implemented.

Recommendation 1.2

RELOCATE DATA CENTER – Denver County Court's IT department should work with Technology Services to move the court's computer servers to the city's existing data center colocation facilities as soon as possible.



DISAGREED

AGENCY ACTION

Although court officials disagreed with this recommendation, we learned the court's information technology team has collaborated with Technology Services to find a new location for additional computer equipment.

This was the agency's response to the recommendation when the original report was issued in August 2018:

The Court will not relocate our data center. The Court will continue to make improvements the data center.

The improvements include but are not limited to: the physical security, notification alerts for temperature, humidity monitoring, access controls, logging and fire/water prevention.

Recommendation 1.3

UPDATE BACKUP PROCESS – The Denver County Court's IT department should use online backup solution or set up a physical backup solution on a nightly basis using the best practice grandfather/father/child backup rotations as soon as possible.



**FULLY
IMPLEMENTED**

AGENCY ACTION

Original target date for completion: June 1, 2019

The court's information technology team said they transitioned off physical storage as their primary backup process. As a replacement, they now use a cloud-based storage solution – Microsoft Azure blob storage – to capture critical data.

Since our recommendation, backups are occurring more frequently and retention has improved. We verified that backups are being performed via the Microsoft Azure blob storage and we reviewed instances when data was restored successfully. For example, the information technology team was able to successfully restore files after a server failure. Therefore, we consider this recommendation fully implemented.

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