Arapahoe County

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Board Summary Report

File #: 24-476	**Agenda Date:** 9/10/2024	**Agenda #:**

To: Board of County Commissioners

Through: Philip Savino, Director, Department of Technology

Prepared By:

Philip Savino, Director, Department of Technology

Presenter: Philip Savino, Director; Brian Gilpatrick, Division Manager

Subject:

2:45 PM *Cloud Infrastructure Modernization Transition Update

Purpose and Request:

The purpose of this study session is to update the board with current transition discoveries and layout options to move forward and progress with cloud infrastructure modernization.

Background and Discussion: As the County advances to phase two of the cloud infrastructure modernization project, we have discovered mistakes made by the cloud vendor in assessing our storage environment. Now that the cloud environment is set up and half of our infrastructure has completed migration, the true monthly costs showing in the portal are significantly higher than the contracted estimate amount.

This discrepancy raised concerns, prompting the IT department to investigate and engage with the cloud provider. The cloud provider has acknowledged this mistake and will honor the current pricing. However, when the contract is up for renewal in 2027, the price will increase significantly to align with market levels. Currently, we are priced for half of our infrastructure at a cost of $520,000 per year, a flat rate for five years. In the new evaluation, it is estimated that, in the worst-case scenario, the cost to host all of our infrastructure in their cloud environment will be $1.9 million per year. With that being said, there are opportunities here that the cloud provider has made us aware of such as 30 to 35% discounting for contract renewals as well as infrastructure optimization that could bring the expense down to $1.33 million. Additionally, it has been identified that a small portion of our infrastructure functions better on premise indicating that not all of our

server workloads are cloud ready today.

As time goes on, there is an opportunity to change business processes and modernize software in a cloud-centric manner, potentially eliminating the need for these on-premises workloads. However, in the interim, it is necessary to maintain sustainability for these systems. Overall, this project has yielded significant cost savings for the county, reducing our infrastructure expenses to half of what we would have paid for an on-premises system over five years. By migrating to the cloud, we have avoided substantial increases in virtualization and software licensing costs. The cloud offers substantial advantages once fully implemented, allowing us to manage our server infrastructure more efficiently. We can turn servers on and off at will or adjust their capacity as needed, rather than purchasing large amounts of storage up front and using it slowly over time. Additionally, the Google cloud environment improves the county's disaster recovery posture.

As our operational posture shifts from capital expenditures to operational expenditures, it is important for the county to position itself to utilize this technology if funding can be secured. This approach future-proofs our operations, enhances business continuity in the cloud and significantly improves cybersecurity and disaster recovery. Cloud providers offer more capabilities in these areas than a county data center can. There are many soft costs avoided with cloud infrastructure, and these savings need to be recognized as cost avoidance. The goal of meeting with the Board is to provide a comprehensive view of the benefits of cloud infrastructure, expected expenditures when the contract is renewed, and seek the Board's permission to either proceed with the cloud strategy or revert to traditional server infrastructure management.

Fiscal Impact: This project has the potential to increase in cost from $520,000 annually to $1.9 million in 2028

Alternatives: Revert back to traditional infrastructure datacenter management with associated cost.

Alignment with Strategic Plan:

☒Be fiscally sustainable

☒Provide essential and mandated service

☒Be community focused

Staff Recommendation: No Staff recommendation

Concurrence: N/A