Calgary
City Auditor's Office

Hyperion System Governance Audit

January 5, 2022

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Table of Contents

The City Auditor's Office conducted this audit in conformance with the *International Standards for the Professional Practice of Internal Auditing.*

Executive Summary

The Hyperion IT system's (Hyperion) purpose is to improve corporate control, reduce duplication and reconciliation of data, and increase transparency of budget information through all stages of budget approval. Hyperion is used by 212 finance users to store, manage, and report budget information. The initial Hyperion implementation was completed in 2019 and a subsequent project is currently underway to improve functionality of the Capital module. Hyperion is supported by IT's Enterprise Support Services (ESS) group, who also support PeopleSoft Financials and Supply Chain Management and PeopleSoft Human Capital Management, which comprise The City of Calgary's Enterprise Suite.

Key aspects of IT system governance are the system rules, roles and responsibilities, and processes in place to ensure a system achieves its purpose. Inadequate governance over the Hyperion system could result in inaccurate budget data utilized in decision making, and inefficient budget processes.

The objective of the audit was to assess the effectiveness of Hyperion system governance by reviewing the design and operating effectiveness of the following processes and controls: governance committees, access controls, change management, training, system outputs, and benefits realization.

Based on our testing, we concluded that the Hyperion system governance processes and controls are designed and operating effectively to ensure complete and accurate budgetary data is utilized to support financial decision making. Governance committees have appropriately defined roles and responsibilities, and access controls were appropriately granted based on business need. Change management processes were defined and followed. Users have found training offered effective in supporting their utilization of the system, and processes have been established to support Hyperion in meeting it's day-to-day purpose of providing complete and accurate budget information.

We identified that improvements in two key areas would support future effective system governance. First, terms of reference for two governance committees were outdated. With The City's organization realignment underway these need updating to ensure the right people are involved in future decision making related to the system. Secondly, improvements in processes for measuring and reporting on the achievement of benefits from system investment will help contribute to the achievement and sustainment of improved business outcomes, such as increased process efficiency. Benefits of implementing these recommendations will extend beyond Hyperion to the entire Enterprise Suite.

Finance's Corporate Budget Office and ESS have agreed to all six recommendations and committed to implementing action plans no later than January 1, 2023. The City Auditor's Office will monitor the status of commitments as part of its on-going recommendation follow-up process.

1.0 Background

The Hyperion IT system (Hyperion) is part of a suite of software tools used by City of Calgary Administration to store, manage, and report budget information. The primary purpose for this software is to improve corporate control, reduce duplication and reconciliation of data, and increase transparency of budget information through all stages of budget approval. [1]

Hyperion is used by Finance staff in the Corporate Budget Office (CBO), part of Finance's Portfolio & Strategy group, and supports many indirect stakeholders in the organization that present financial information, manage City of Calgary finances, or request budget adjustments. Hyperion is used to manage the capital and operating budgets: for example, it acts as a sole source of input for budget revisions, approvals and reallocations used in decision making. It is also utilized to transfer approved budget information to the PeopleSoft finance system for operational and transactional reporting. This system facilitates integrated, real time budget control and allows users to extract information based on their own customizable reporting specifications.

Finance currently has 212 active users of the Hyperion Capital and Operating Budget modules. Users interact with the system through SmartView, a Microsoft Excel add in. Using SmartView, users can view, import, manipulate, distribute, and share data in Microsoft Excel.

Hyperion is supported by IT's Enterprise Support Services (ESS) group, who also support PeopleSoft Financials and Supply Chain Management and PeopleSoft Human Capital Management, which comprise The City of Calgary's Enterprise Suite.

The Hyperion implementation project was initiated in 2016 and was completed (system fully implemented) in 2019. The need to implement a centralized planning, budgeting, and forecasting solution arose as the prior system posed challenges such as:
- Paper based process that used spreadsheets with thousands of manual tasks,
- A complex maintenance and support environment,
- An over-reliance on a small number of staff with focused expertise,
- Lack of advanced analytical tools available for forecasting and trend analysis, and
- A lack of a common budget repository of knowledge; information was distributed as needed.

A subsequent project to update the capital budgeting module to increase functionality was on-going at the time of the audit.

Through the implementation of the Hyperion system, the CBO & other stakeholders expected to achieve:
- Improved budgeting process integrity and efficiency,
- Improved standardization of processes/easier training and improved knowledge capture,
- Elimination of multiple budgeting systems and their related support complexity and costs,
- Reduced effort required for data integration between budgeting shadow systems/spreadsheets, and PeopleSoft/other source systems, and
- Increased efficiency for ad hoc analysis, reporting requests using high-function reporting/ analysis toolkit.

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[1] Hyperion Budget and Planning (City of Calgary Intranet)

Inadequate governance over the Hyperion system could result in significant risk to The City, including inaccurate budget data used to make decisions and associated financial and reputational impact, as well as lead to inefficient budget management processes.

2.0 Audit Objectives, Scope and Approach

2.1 Audit Objective

The objective of this audit was to assess the effectiveness of Hyperion system governance. We defined system governance as the rules, roles and responsibilities, and processes in place to ensure a system achieves its purpose. The objective was achieved by reviewing the design and operating effectiveness of controls in the following areas:

- Hyperion rules, roles and responsibilities:
    - Governance committees,
    - Access controls; and
    - Change Management.
- Processes to support Hyperion achieve its purpose:
    - Training,
    - System outputs; and
    - Monitoring of benefits realization.

2.2 Audit Scope

The scope of this audit included Hyperion system governance processes and controls in operation from January 2021 to June 2021.

2.3 Audit Approach

We assessed the design and operation of the governance processes and controls identified through:

- Interviews with the CBO, Portfolio & Strategy and IT leaders and staff,
- Reviewing Hyperion policies and procedures,
- Surveying Hyperion users to understand their training experience with the system; and
- Reviewing operation of individual system governance processes.

3.0 Results

The objective of this audit was to assess the effectiveness of Hyperion system governance. We reviewed two aspects of IT system governance: the rules, roles and responsibilities (governance committees, access controls and change management processes), and processes in place to ensure Hyperion achieves its purpose (training, system outputs, and monitoring of benefits realization).

We concluded that, based on our testing, Hyperion system governance is designed and operating effectively to ensure complete and accurate budgetary data is utilized to support financial decision making. Governance committees have defined roles and responsibilities, access controls were appropriately granted based on business need, and change management processes were defined and followed. Users have found training offered effective in supporting their utilization of the system, and processes have been established to support Hyperion in meeting it's day-to-day purpose of providing complete and accurate budget information.

We identified that improvements in two key areas would support future effective governance:
   i.   Terms of reference for two governance committees were outdated. Given The City's on-going organization realignment these need updating to ensure the right people are involved in future decision making related to the system.
   ii. Improvements in processes for measuring and reporting on the achievement of benefits would support the on-going delivery of business outcomes from investing in Hyperion, such as increased process efficiency.

In addition, we identified improvements that would support the efficiency and effectiveness of the user access request provisioning process.

Results of our testing for each of the six components of governance assessed are summarized below.

3.1 Governance Committees
Governance committees provide the decision-making structure to support effective IT system governance. Hyperion is overseen by two governance committees: the ESS Governance Group and the ESS Process Owners Group. The ESS Governance Group is comprised of senior managers from The City's Finance, IT, Supply Management, and HR Business Units. Their mandate is to provide an enterprise suite vision and objectives in line with The City's objectives. The ESS Process Owners Group is comprised of Managers who oversee the implementation of the processes to support the ESS vision.

We reviewed the Terms of Reference for both the ESS Governance Group and the ESS Process Owners Group to assess whether appropriate roles and responsibilities had been defined to support effective decision making for the Hyperion System. We also interviewed key leaders and reviewed the groups meeting minutes.

We noted that roles and responsibilities were defined, and appropriate individuals consulted to support decision making. However, the ESS Governance Group and ESS Process Owners Group Terms of Reference were last reviewed and updated in 2012 and 2008 respectively. With The City's organization realignment and associated role changes expected to be completed in early 2022, updated and accurate Terms of Reference are important to ensure that the right people are involved in future decision making (recommendation 1).

3.2   Access Controls

Access controls are a key component of effective system governance that regulates who can view or change data in an IT system. We reviewed the Hyperion user access requests and reviewed processes to confirm that access rights are periodically reviewed and appropriate based on job roles and responsibilities.

We reviewed two user access requests (representing 100% of the population of access requests during the time period audited) and requested supporting documentation evidencing review and approval by the user's supervisor and finance lead. The access was appropriately granted to these users based upon a business need. We identified an opportunity to enhance procedures, as neither request included evidence of approval from the CBO Finance Lead and one request was missing supervisor approval. User access provisioning procedures had not been approved or widely shared. We recommended Administration approve these procedures and share them with stakeholders (recommendation 5) and reinforce the need to document evidence of approval (recommendation 6).

CBO conduct an annual user access review, which is an appropriate frequency for the risk associated with the system. We reviewed a listing of 213 Hyperion users to test if this access review was effective. We identified that one user no longer required their access, which had not been identified through CBO's user access review. Due to this low error rate (0.5% of the population) we concluded that the user access review process was operating effectively.

3.3   Change Management

A defined change management process supports effective IT system governance by providing a framework to support controlled, authorized changes to an IT system. We reviewed the change management policies and procedures to assess whether the policies and procedures defined how changes were identified, prioritized, documented, and authorized. We tested four changes representing 100% of the population of system changes during the time period audited.

Our review confirmed that a change management process has been defined which covers identification, prioritization, documentation, and authorization of changes. The change management process has been approved by senior management and, based on our testing, is followed to implement changes. This process ensures changes are tested, approved and backout plans exist prior to migrating changes into production. Access to migrate program changes into production is restricted to authorized individuals per the change management process.

3.4   Training

Effective training supports IT system governance by assisting users in effectively utilizing the system, which contributes to Hyperion achieving its purpose and desired outcomes. All Hyperion users have access to the CBO SharePoint site that provides access to training guides and additional electronic practice courses to show step by step processes and procedures.

We conducted a survey to understand if adequate training provisions were planned for Hyperion users to support efficient and effective use of the system. The survey was sent to 119 unique users (representing 208 of the 212 capital and operating module user accounts) and we received responses from 42 users. 90% of respondents indicated they received adequate support in using Hyperion and adequate training provisions were planned for Hyperion users to ensure efficient and effective use of the system. 32% of respondents also

provided feedback on how training could be improved, which was shared with CBO for their consideration in future training development.

3.5   System Outputs

The day-to-day operational objective of Hyperion is to provide complete and accurate budget information. We assessed the Executive Information Report (EIR) budget reporting process and controls over the interface between PeopleSoft and Hyperion which support Hyperion in achieving the purpose of providing accurate and complete budget data.

We concluded that processes are designed and operating effectively to support Hyperion in providing complete and accurate budget data. The CBO provides monthly budget reporting through the EIR. We reviewed a sample of three EIRs and confirmed that processes are in place to review budget data prior to finalizing the EIRs. Additionally, we confirmed that month end reconciliations and exception e-mails are in place to ensure data transfers across the interface between PeopleSoft and Hyperion correctly. Collectively these controls are sufficient to ensure reported budget data is accurate, complete, and timely.

3.6   Monitoring of Benefits Realization

Monitoring benefits realized from on-going investments (e.g. significant upgrades) in an IT system supports effective governance by providing information to decision makers as to whether the system is achieving the purpose for which it was implemented.

We assessed the documentation for the Capital Cube Rewrite Project documentation, which was underway at the time of the audit, with the aim of updating the capital budgeting module to increase functionality and considered how Governance Committees support accountability for the realization of benefits.

The project charter for the Capital Cube Rewrite Project identified five key success criteria that will be used to evaluate the ultimate success of the project. However, these criteria needed to be defined further by establishing baseline and target performance and adding output and outcome measures (recommendation 2) to better support the monitoring of benefits realized. Additionally, we recommended the ESS Governance Group Terms of Reference include responsibility for benefit realization and an accountability process for sponsors to report back on benefit achievement (recommendation 3). Finally, we recommended evaluating if establishing Key Performance Indicators (KPIs) to measure system effectiveness on an on-going basis would be beneficial (recommendation 4).

We would like to thank staff from Finance (CBO) and IT (ESS) for their assistance and support throughout this audit.

4.0 Observations and Recommendations

4.1 Enterprise Suite Terms of Reference

The Terms of Reference for the ESS Governance and ESS Process Owner Groups have not been reviewed or updated to reflect changes in organizational composition, authority, roles and responsibilities since their adoption in 2012 and 2008 respectively.

Outdated Terms of Reference could result in incorrect prioritization and coordination of projects, misalignment with organizational goals, and the impact of system changes not being identified.

We noted that the ESS Process Owners Group membership has been altered through organizational changes since its inception, with eight out of nine member roles having changed.

The ESS Process Owners Group had identified the outdated Terms of Reference, however, plans to update them were delayed due to The City's organization realignment project. With The City's realignment and associated role changes expected to be completed in early 2022, updated and accurate Terms of Reference are important to ensure that the right people are involved in future decision making.

Recommendation 1
The IT Manager (ESS):
   i. Coordinate updating the ESS Governance Group and ESS Process Owner Group Terms of Reference to incorporate changes in composition, authority, roles and responsibilities, once the realignment is complete.
   ii. Obtain approval for the revised documents from the relevant committee.
   iii. Establish a process to periodically review Terms of Reference every four years to align with The City's budget cycle, and additionally whenever significant organizational changes occur.

Management Response
Agreed.

Action Plan	Responsibility
Post Realignment, ESS Manager will complete a Terms of Reference review and updates for both ESS Process Owners and ESS Governance groups. For future, ESS Manager will align a review of Terms of Reference with City budget cycle or significant organizational changes impacting Terms of Reference.	Lead: Manager IT (ESS) Support: ESS Governance Committee, ESS Process Owners Committee. Commitment Date: Jan 1, 2023

4.2 Benefit Realization

Documented Hyperion system and project success criteria are required to support the CBO in assessing on-going system effectiveness.

Project success criteria must be specific, measurable, attainable, relevant, and time bound. Key Performance Indicators (KPIs) should be considered to measure system effectiveness on an on-going basis. Defined success measures and KPIs contribute to the achievement and sustainment of improved business outcomes from investment in the Hyperion system.

We reviewed the Project Charter for the Hyperion Capital Cube Rewrite project, which was on-going at the time of the audit. We identified the opportunity to define the project key success criteria by:

a. Establishing measurable and specific baseline and target performance for the following success criteria:
   - "Fewer data issues related to PeopleSoft tree updates",
   - "Reduce the number of issues related to writeback to PeopleSoft", and
   - "Fewer instances of user inputted entries that, when loaded to Peoplesoft, are rejected due to chart field rules"

b. Associating output and outcome measures to success criteria: for example
   - "BudPrep work directly within the newly written CCapital application". An output measure could be adoption/usage levels of the new application. An outcome measure could be elimination of manual processes / spreadsheets and time savings.

The ESS Governance Group Terms of Reference do not include an explicit responsibility for the Enterprise Suite's benefit realization. KPIs are not currently reported related to the realization of benefits from projects or effectiveness of Hyperion as a system. Identifying these KPIs would support the ESS Governance Group in fulfilling their role to "Monitor the achievement of overall Enterprise Suite objectives".

Recommendation 2

The Hyperion Capital Cube Rewrite Project Sponsor work with the Corporate Budget Office to update the Project Charter for the Hyperion Capital Cube Rewrite Project to incorporate:
   i. Baseline and target performance for project success criteria.
   ii. Incorporate output and outcome measures.

After making these updates the Charter should be reapproved by the project sponsor.

Management Response

Agreed.

Action Plan	Responsibility
Manager IT(ESS) will coordinate with CBO/Hyperion Capital Cube Rewrite Project Sponsor, to add metrics to the project charter, reapprove Charter and report that metric to the ESS Governance Group.	Lead: Manager IT (ESS) Support: Manager Finance (CBO) Commitment Date: July 1, 2022

Recommendation 3

The Manager of IT(ESS) work with the ESS Governance Group to:

i.   Update Terms of Reference for the group to include an explicit responsibility for ensuring project benefit realization.

ii.   Implement a process for project sponsors to report back to the Governance Group on the realization of project benefits.

Management Response

Agreed.

Action Plan	Responsibility
Manager IT (ESS) will add to the Terms of Reference that project benefit reporting/realization is the responsibility of the body that has approval authority for projects (as per approval level requirement). The Manager IT (ESS) will be prepared to provide, or request from project sponsors, the benefits realization metric be reported on to the appropriate approval body.	<u>Lead</u>: Manager IT (ESS) <u>Support</u>: Project Sponsors, ERP Project Approval bodies. <u>Commitment Date:</u> Jan 1, 2023

Recommendation 4

The Manager of IT(ESS) facilitate the ESS Governance Group and Process Owner Group to evaluate if there is a benefit to reporting on-going KPIs to measure system effectiveness in meeting business needs.

Management Response

Agreed.

Action Plan	Responsibility
The Manager of IT(ESS) will work with the ESS Governance Group and ESS Process Owners Group to evaluate if ERP projects that are approved based on measurable benefits, should include a reportable KPI that could be provided to Governance or Process Owners to demonstrate that benefits expected are realized. Identification and Reporting of the KPI is the responsibility of the Project Sponsor and project KPI reporting would occur at the same thresholds as project approval.	<u>Lead</u>: Manager IT (ESS) <u>Support</u>: Project Sponsors <u>Commitment Date:</u> Jan 1, 2023

4.3   User Access

User access procedures are not sufficiently defined. User access requests should be reviewed and approved by appropriate authority to ensure that relevant access is granted to users with

a business need. Inappropriate access may lead to intentional and/or unintentional changes to budget information, which in turn could disrupt the financial decision-making process.

We reviewed user access procedure documents and operation of the access provisioning process. CBO had prepared a procedure on the user access request process. This procedure was not widely shared or incorporated into the Hyperion training SharePoint site. Additionally, draft year end access review procedures were prepared by the Finance Lead, however there was no evidence that the procedures had been reviewed and approved by management or shared with other relevant members of the CBO team.

ESS procedures requires ESS team members provisioning access to include evidence of approval in the access request Remedy ticket. We reviewed two user access requests (representing 100% of the population of user access requests processed between January and June 2021) and requested supporting documentation evidencing review and approval by the user's supervisor and finance lead. Neither request included evidence of approval from the CBO Finance Lead and one request was missing supervisory approval. In both cases access appeared appropriate.

Recommendation 5
The Corporate Budget Office Finance Manager should:
    i.   Review and approve access request and monitoring procedures, and
    ii.   Distribute this information to relevant stakeholders via the Hyperion SharePoint site.

Management Response
Agreed.

Action Plan	Responsibility

The Corporate Budget Office Finance Manager to document:
    i.   data & module security levels
    ii.   process to review and validate access requests
    iii.   process and schedule to review all user access
    iv.   monitoring procedures related to Hyperion access
 	
Per above notes: Hyperion system access and on-going review processes to be documented and communicated. This is currently in progress, beginning with the utilization of existing IT system request tools.
	Lead: Finance Manager (Corporate Budget Office)
	
	Support:
	ESS/IT Support – facilitate ticket and system update
	
	Commitment Date:
	In Progress, full compliance by July 1, 2022

Recommendation 6
The IT Manager (ESS) reinforce that team members provisioning Hyperion access include attachments evidencing Supervisory and Finance Lead approval in the access request Remedy ticket.

Management Response
Agreed.

Action Plan	Responsibility
The Manager IT (ESS) will ensure that the Hyperion Access model adopts the existing ERP access request model which includes workflow and evidence-based approvals when granting Hyperion Access.	Lead: Manager IT (ESS) Support: Leader ESS, Project Center 1; Leader ESS, Support. Commitment Date: March 31, 2022