

---

**For Information**

---

**REPORT TITLE: Enterprise Architecture Audit**

**FROM: Jennifer Weinman, Interim Director, Enterprise Risk and Audit Services**

---

**OBJECTIVE**

To inform the Audit and Risk Committee of the results of the Enterprise Architecture audit.

**REPORT HIGHLIGHTS**

- The services of an external information technology audit consultant were procured to perform the Enterprise Architecture audit.
  - There are effective controls in place to manage the risks related to the Region's enterprise architecture.
  - The audit identified positive trends in a good understanding of enterprise architecture practices and risks, defined target architecture, and involvement of enterprise architects in key decisions.
  - There are opportunities to strengthen governance and improve controls in the following areas:
    - Defining an overarching governance, risk, and compliance function
    - Enhancing enterprise architecture focus to strategic level
    - Defining and achieving the desired maturity level
  - Management has developed action plans and timelines to address the risks identified in the report, with tentative implementation dates due to the impacts of COVID-19 on the Region's resources.
- 

**DISCUSSION****1. Background**

The 2020 Enterprise Audit Services Risk Based Work Plan included an Information Technology Enterprise Architecture audit which was identified as an area of high risk.

The Region of Peel's enterprise architecture function is part of the IT Solutions division and was established in 2010. Enterprise Architecture is the process used to standardize and organize IT infrastructure to align with the Region's business outcomes. It creates and communicates key principles and models that describe the future state, target architecture for the Region. The Region requires diversified IT solutions and skilled resources to achieve its strategic and operational business outcomes. Without standardizing and organizing IT infrastructure, technologies, and practices, meeting the IT needs for the organization will become costly, inefficient, and labour intensive.

## **Enterprise Architecture Audit**

### **2. Audit Objectives and Scope**

A risk-based approach was used in establishing the objectives, scope, and approach for this audit engagement. The overall objective of the audit was to determine if management has implemented effective controls to manage the risks related to the Region of Peel's enterprise architecture. Enterprise Risk and Audit Services obtained the services of an audit consulting firm with expertise in IT to perform the audit of enterprise architecture.

The scope of the audit included the enterprise architecture domains outlined and defined in Appendix I. Specifically, the audit focused on assessing the effectiveness of controls in the following areas:

- The current capability and maturity of the Region's enterprise architecture function
- The Region's enterprise architecture governance regarding application and infrastructure ownership
- The roles and responsibilities to be set-up for upcoming business and application transformation projects

The scope of the audit excluded the operational management of applications and infrastructure, including security.

This audit was conducted in conformance with the *International Standards for Professional Practice of Internal Auditing*.

### **3. Audit Observations and Management Response**

Overall, there are effective processes and controls in place to manage the risks related to the Region's enterprise architecture. The audit identified the following positive trends as it pertains to enterprise architecture at the Region:

- There is a good understanding of enterprise architecture practices and risks
- A target architecture has been defined, which aligns the IT processes to the business services
- The enterprise architects are involved in key decisions and provide their recommendations from an enterprise architecture point of view

There are opportunities to strengthen governance and improve controls in the following areas:

- To define overarching governance, risk and compliance function
- To enhance the enterprise architecture focus to strategic level
- To define and achieve the desired enterprise architecture maturity level

## **Enterprise Architecture Audit**

### **a. Governance, Risk and Compliance Function**

The governance, risk and compliance function has not been fully established within the Region to connect all the dots between people, processes, systems to identify and address the risk exposure within the organization. There is a need to define the governance, risk and compliance function to support the Region with the end to end management of its risk and control processes across all layers and levels of the organization. This includes but is not limited to:

- Defining the governance, risk and compliance vision, objectives, and mandate
- Understanding the business units and departments, defining the risks and issues in those areas including risk ownership, and defining the reporting requirements
- Aligning the organizational hierarchy (owners and stakeholders) and risk and control classification and terminologies

There is a high risk (see Appendix II for the Risk Profile) that without a defined governance, risk and compliance function, mechanisms may not be in place to manage risk holistically across the organization and to help ensure that the Region has insight into the risk exposure of the organization.

#### **Management Response**

The Chief Administrative Officer, in conjunction with the Executive Leadership Team, as part of a series of reviews, will assess and strengthen oversight responsibilities and accountabilities, include an assessment of how to best incorporate at an organizational level, governance, risk and compliance functions and a plan for when those functions will be established. This work is expected to be started in September 2021, (timing subject to the progress on COVID-19).

### **b. Strategic Focus of Enterprise Architecture**

The current state of enterprise architecture at the Region of Peel is mostly transactional, reactive, and optional. The enterprise architecture function and its processes and activities should be situated at the strategic level. Further there should be formal support from the business areas to optimize IT investments in line with business area strategies.

The enterprise architecture function's mandate and responsibilities should be defined, and the enterprise architects should be part of strategic IT bodies to actively work towards achieving the target architecture.

There is a high risk that without the enterprise architecture function being able to strategically support and drive processes, the target architecture may not be achieved impacting the ability to support the business areas in a strategic manner.

#### **Management Response**

The Commissioner, Service Excellence and Innovation will establish the mandate and responsibilities for the enterprise architecture function to help ensure the

## Enterprise Architecture Audit

function has a role in IT strategy and IT strategic activities and bodies. Further, the Commissioner will obtain support and commitment from the business areas to formalize the role of the enterprise architecture function in realizing the target architecture. It is expected that this work will be completed by December 31, 2023, (timing subject to the progress on COVID-19).

### c. Enterprise Architecture Maturity

The assessment of the Region's enterprise architecture identified opportunities to improve the overall maturity level of the enterprise architecture function. As the function's maturity increases, enterprise architecture will become consistently effective in helping the Region optimize IT based investments to align with the business areas' strategies.

To strengthen controls and work towards increasing the level of enterprise architecture maturity, management should develop or enhance controls in the following areas:

- defining enterprise architecture performance measures and risk indicators
- procuring an enterprise architecture repository solution that:
  - enables planning and performing diagnostics
  - creates efficiencies
  - enables better alignment to strategies
- defining an assessment framework to help identify emerging risks or gaps in the enterprise architecture practices, activities, and capabilities
- developing a service and integration framework to manage business and technical services and identify gaps in achieving the target architecture
- identifying the required skills and capabilities to achieve and maintain the target architecture
- ensuring the enterprise architecture function has a role in governing all enterprise architecture domains
- creating organization wide enterprise architecture standards and awareness to help achieve the target architecture
- defining a strategy, operating model, and plan to support the Region's cloud-first principle

### Management Response

To address the process, staffing and technology recommendations from the audit report in an integrated manner, the Director, IT Solutions will build the business case to receive management approval and funding to establish an Enterprise Architecture Advancement Program. Subject to approval of this request, work will commence in 2022 and is anticipated to be completed over a three year period.

## CONCLUSION

Overall, there are effective processes and controls related to the Region of Peel's enterprise architecture. There are opportunities to enhance the enterprise architecture role to a strategic focus through improving the Region's enterprise architecture maturity level.

## **Enterprise Architecture Audit**

The audit identified positive trends and areas of improvements to include the organizational level governance, risk and compliance, strategic focus of enterprise architecture and enhance the enterprise architecture maturity level.

Enterprise Audit Services has reviewed management's action plans and is satisfied the actions developed will address the risks identified. Enterprise Audit Services will follow-up on the status of these management action plans and will report back to the Audit and Risk Committee on the status of all management action plans semi-annually.

Please note that the implementation dates are tentative due to the impacts of COVID-19 on the Region's resources.

## **APPENDICES**

Appendix I – Enterprise Architecture Domain Definitions

Appendix II - Risk Profile

---

*For further information regarding this report, please contact Jennifer Weinman, Interim Director, Enterprise Risk and Audit Services, at [jennifer.weinman@peelregion.ca](mailto:jennifer.weinman@peelregion.ca)*

*Authored By: Anila Lalani, CPA, CGA, CIA, CISA, Acting Manager, Enterprise Audit Services and Jayrani Bungsy, FCCA, CIA, Senior Internal Auditor*

***Reviewed and/or approved in workflow by:***

Divisional Director.