Enterprise Systems Transformation Program

Recommendation

That the June 4, 2019, Financial and Corporate Services report CR_6894, be received for information.

Executive Summary

The City of Edmonton is embracing new ways of delivering programs and services to meet the challenges and opportunities of today's digital world. Administration recognizes that to continue to be a modern municipal corporation, information and technology must play an integral role in meeting the evolving needs and expectations of citizens. The Enterprise Systems Transformation Program (ESTP) provides a plan to modernize the City's technology systems, allowing the organization to reimagine its use of innovative digital tools, systems and processes.

The City's enterprise technology systems need to be improved to allow the City to work in a more flexible, agile manner and make additional necessary transformational impacts. This will allow Administration to effectively and efficiently manage the corporation and build stronger relationships with residents. In line with leading practices that minimize customization to make software upgrades less complex, the Enterprise Systems Transformation Program will significantly improve the City's ability to deliver services in an integrated and cost-effective manner.

Based on an assessment of strategic, financial and risk factors, Administration recommends implementing a single modernized enterprise resource planning solution. This single solution will result in the lowest total cost of ownership to the City while supporting Council's vision for Edmonton as a Smart City.

Report

Background

The City of Edmonton relies on multiple enterprise technology systems to deliver 73 services to residents that are aligned with the Corporate Business Plan. These technologies also support the City's core functions including finance, human resources, inventory and warehouse management. At the time that these systems were designed and implemented, it was accepted industry practice to heavily customize software.

With the implementation of an ESTP, the City will be better able to respond to changing needs and adapt to new technologies in a more flexible and agile manner. This program will promote transparency, offer additional open data and advance our leadership as a Smart City.

Modern enterprise systems incorporate developments in technologies including the use of cloud platforms, advanced data analysis tools to facilitate data driven decision making and the ability to process tremendous amounts of data from new connected devices. SAP has advanced their technologies in order to incorporate these new and emerging trends and will no longer support the current version after 2025. The City's technical integrations between SAP and Peoplesoft are extremely complex as a result of heavy customization within both systems. By choosing to implement one system, these complex integrations will not have to be redeveloped.

The ESTP will improve Administration's ability to provide core and resident service delivery in an integrated and cost-effective manner.

Enterprise Systems Transformation Program Approach

Consistent with Capital Project Governance Policy C591, Administration will utilize a similar gated project delivery approach that is applicable to technology transformation projects. This approach will ensure that an appropriate level of planning and design related to the project has occurred in order to mitigate risks and to ensure that the outcomes of the projects can be achieved prior to seeking Council's approval of the budget required for full project implementation. Council will receive timely, accurate program information at set points throughout the program lifecycle to affirm direction.

Opportunities and Challenges

The ESTP will result in several opportunities for positive change for both residents and the City organization. By adhering to best practices, new modernized processes will capitalize on automation, allowing for innovation opportunities to enhance the citizen experience. In addition, a modern enterprise system will better protect enterprise data against cyber threats, enforce security policies and support regulations for data governance. Information management will be enhanced through additional data and analytics capabilities supporting informed decision making and corporate initiatives such as Enterprise Performance Management.

A modernized enterprise technology system is also expected to improve the employee experience by increasing efficiency and collaboration while reducing the time spent performing unnecessary or low-value work.

Next Steps

To proceed with the ESTP, the City must secure funding. Once this funding has been secured, Administration will initiate the procurement of a software solution and a system integrator and begin to undertake program implementation.

The program consists of two phases. The following activities will be completed in Phase 1 (see Attachment 1):

1. Program Oversight
2. Program Preparation
3. Technology Systems Integration
4. Implementation
    ○ Human Resources (wave one of three)
    ○ Supply Chain Management
    ○ Finance
    ○ Enterprise Asset Management
5. Organizational Change Management

Phase 2 will be further developed and validated during the Phase 1 activity of Program Preparation. Once completed, Council will be provided with an update.

Administration will develop a robust project governance structure that includes a clear leadership vision and direction for the ESTP. Components of this leadership vision and direction include:

● Establishing key performance indicators to measure the rate of program adoption;
● Developing a comprehensive change management plan; and
● Ensuring compliance with legislative and other legal requirements with respect to the technological requirements of the ESTP.

Budget / Financial

The ESTP requires $30 Million for Phase 1. Administration has included a recommendation in the 2019 Spring Supplemental Capital Budget Adjustment to fund this phase.

An unfunded capital profile for Phase 2 estimated at $30 Million will be submitted for Council's consideration during a future Supplemental Capital Budget Adjustment. This amount will be validated and updated as Phase 1 of ESTP progresses.

The incremental operating impacts of capital are estimated at $1.6 million per year. If Council approves the capital profile for Phase 1, Administration will include these impacts in the 2019 Fall Supplemental Operating Budget Adjustment.

Corporate Outcomes and Performance Management

Corporate Outcome(s): Condition of Success			
Outcome(s)	**Measure(s)**	**Result(s)**	**Target(s)**
IT-based infrastructure and systems are flexible, reliable and sustainable	TBD	TBD	TBD
Residents are engaged in local government	TBD	TBD	TBD

Risk Assessment

Risks if Approved:

Risk Element	Risk Description	Likelihood	Impact	Risk Score (with current mitigations)	Current Mitigations	Potential Future Mitigations
Governance	Overlapping scope between other corporate transformation initiatives and ESTP.	3 - possible	4 - severe	12 - medium	Develop a stakeholder engagement strategy to ensure alignment of scope across the organization.	
Change Adoption	Slow adoption or rejection of new solutions and processes related to the ESTP.	3 - possible	4 - severe	12 - medium	Clearly define key performance indicators to measure the rate of adoption and develop comprehensive change management plans.	
Technology	Increase in risks related to data security, data retention, residency and recovery due to the implementation of a Cloud ERP.	2 - unlikely	4 - severe	8 - medium	Ensure compliance with legislative and other legal requirements within vendor contract(s).	
Data	Inconsistent data quality between in-scope systems could impact functionality.	3 - possible	4 - severe	12 - medium	Prepare, cleanup and align master data before implementation.	

Risks if Not Approved:

Risk Element	Risk Description	Likelihood	Impact	Risk Score (with current mitigations)	Current Mitigations	Potential Future Mitigations
Technology	Inability to integrate systems.	5 - almost certain	4 - severe	20 - high	Ongoing identification of best practices, completing environmental scans, maintaining relationships with current vendors, keeping current with research organizations.	Pursue potential independent third-party support.
Technology	Inability to protect digital assets from increasing cyber security threats.	3 - possible	4 - severe	12 - medium	Implementation of a cyber security program is underway.	Attempt to identify compensating security controls including acquiring additional tools.
Corporate Governance	Current unique departmental processes are not standardized resulting in increased costs and reduced efficiencies.	3 - possible	2 - moderate	6 - low	Develop and implement leadership vision and direction for standardization.	Adopt a governance model to implement corporate-wide processes including standardized controls.

Attachment

1. Enterprise Systems Program - Phase 1 Activities

Others Reviewing this Report

- C. Owen, Deputy City Manager, Communications and Engagement
- G. Cebryk, Deputy City Manager, City Operations
- A. Laughlin, Deputy City Manager, Integrated Infrastructure Services
- K. Armstrong, Deputy City Manager, Employee Services
- R. Smyth, Deputy City Manager, Citizen Services
- S. McCabe, Deputy City Manager, Urban Form and Corporate Strategic Development
- B. Andriachuk, City Solicitor