FUSION PROJECT – SAP WAVE 1 IMPLEMENTATION REVIEW

Audit Report

Independent Office of the City Auditor

August 6, 2025

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EXECUTIVE SUMMARY

Background

In accordance with the approved 2022 Audit Plan and the Terms of Reference dated February 8, 2023, the Independent Office of the City Auditor (Office) reviewed the Wave 1 implementation of SAP, the City of Saskatoon's (City) new Enterprise Resource Planning (ERP) system.

The Fusion Project ERP implementation was part of the City's workplace transformation initiative to simplify and integrate the City diverse processes and foster a unified approach to managing operations across the different functional areas within the City. The Fusion Project was implemented in two phases with an approved budget of $34.5 million:

- **Wave 1 (Completed January 2021):** Focused on Finance (FIN), Human Capital Management (HCM – including Time & Attendance, Payroll, Organizational & Employee Management), Enterprise Asset Management (EAM) in Saskatoon Water, and Supply Chain Management (SCM) modules.
- **Wave 2 (Completed in 2022):** Implemented the remaining HCM functionalities (Recruiting, Learning Management System, Compensation, and Incident Management/Labour Relations) and rolled out EAM to the rest of the corporation.

Appendix A includes additional Background information on the Fusion Project.

Objective and Scope

The objective of this engagement was to evaluate the success of the Wave 1 implementation as it relates to FIN, SCM, EAM, and HCM modules. The scope included a high-level strategic review of the benefits, challenges, and areas for improvement. The engagement did not include end-to-end (in-depth) testing of controls within the implemented modules, nor did it review the Wave 2 implementation or subsequent sustainment activities.

Approach

The engagement focused on internal stakeholder interviews and documentation review.

The review was initiated by the Office in late 2022 using internal resources. In March 2024, an external service provider was engaged to complete the review and draft a preliminary report. In October 2024, after the review was substantially complete, current Office staff assumed responsibility for finalizing this report.

Since the engagement's inception, the Office experienced a full staffing turnover, presenting challenges in assessing the earlier work performed. Given the significant passage of time since the Wave 1 implementation was competed in January 2021, the Office determined that it was not beneficial to perform additional review procedures. Instead, the focus shifted to collaborating with the Administration to align on reportable findings and action items. While the system has evolved since go-live, the findings presented remain relevant for consideration in the 2025 SAP upgrade project and future technology projects.

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Summary of Benefits

The Value for Money analysis identified the following key benefits of the SAP implementation:

- **Removal of Manual Processes:** The implementation has significantly reduced reliance on manual processes, leading to increased accuracy and efficiency.
- **Increased Efficiencies**: Operational efficiencies have been enhanced through streamlined workflows and better resource management.
- **Continuous Improvement**: The system facilitates ongoing improvements by enabling data-driven decision-making and process optimization.

Summary of Findings

The following table summarizes the Findings that are relevant for the Administration to consider. More details, including the Administration's responses, are included in the detailed report. Risk ratings are based on the guidance in Appendix B.

Focus Area	Risk	Key Findings
Training	Medium	Improve the overall training strategy for future SAP upgrades/implementation by: • Ensuring clear communication regarding the expectations to complete training and maintain records. • Implementing a continuous improvement process. • Developing task-based training materials. • Ensuring ease of access to, and regular review/updating of, the Fusion Learning Library documentation.
Technical System Change Management	Medium	Update the system development life cycle (SDLC) to include performance testing, including stress and load testing.
Issue Resolution	Medium	Continue efforts to resolve open issues including the use of external service providers for long-standing items.
Governance	Low	Opportunity to improve usability and ease of access of Wave 1 implementation processes and procedures through improved organization and consistent naming conventions.
Access Management	Low	Periodic user access reviews occur, but there is an opportunity to improve efficiency through automation.

In addition to the above items, the Administration proactively addressed numerous improvement opportunities identified during this engagement. These are summarized in Appendix C.

Next Steps

The Office is satisfied with the Administration's responses and will follow-up on their action plans to ensure they are appropriately implemented.

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DETAILED REPORT

Value for Money Analysis

The implementation of SAP has contributed significantly to improving the efficiency and effectiveness of the City's operations. Based on internal stakeholder interviews and documentation review, key benefits achieved due to this implementation include:

- **Centralized Data Source:** SAP established a single master data source for the core ERP capabilities, improving data consistency and reliability across the City's operations. Centralization eliminated many data silos regarding corporate related data, ensuring that all departments have access to the same accurate and up-to-date information.
- **Efficiency and Productivity:** SAP significantly reduced time-consuming manual, paper-based, and duplicate processes, leading to enhanced operational efficiency. Automated workflows and streamlined processes have minimized errors and increased the speed of transaction processing.
- **Real-time Data Analytics:** The implementation increased the accuracy and timeliness of data analytics, enabling the Administration to make real-time data-informed decisions related to corporate data.
- **Automated Workflows:** SAP provided automated workflows, which streamlined processes and reduced the potential for human error and has led to more efficient handling of tasks such as payroll processing, procurement, and inventory management.
- **Standardized Processes:** The implementation facilitated the standardization of processes across the City, promoting a unified approach to operations and improving overall effectiveness. Standardization has also helped ensure compliance with regulations and policies.
- **Enhanced Reporting Capabilities:** Improved reporting capabilities allowed for better tracking and analysis of key performance indicators (KPIs), supporting strategic planning and decision-making. Detailed and customizable reports have enabled departments to monitor their performance and identify areas for improvement.
- **Improved Financial Management:** The integration of financial processes within SAP led to more accurate and efficient financial management, including budgeting, forecasting, and reporting. This integration has provided better control over financial resources and improved transparency.

Training

In ERP implementations, best practice includes a robust training strategy with mechanisms to verify that all users have completed necessary training before the system goes live. A training management system with attendance tracking is essential for recording employee participation, maintaining compliance, and assessing workforce development.

Medium Risk	User Training Records and Materials
Finding #1	The Fusion Wave 1 training program included general sessions for all employees and department-specific sessions for critical personnel (all were online learnings, as implementation was during COVID, and in-person trainings was not possible). Post-go-live, training focused on

Medium Risk	User Training Records and Materials
	departmental needs. For in-field staff, the Fusion Project team collaborated with field staff managers to integrate SAP training into their regular meetings.
	Training Records: For Wave 1 training:
	• There was no attendance tracking mechanism in place. Departmental managers were to track attendance but did not consistently maintain records.
	• There was no process of obtaining attestations from the field staff managers confirming their employees had completed training.
	Training Materials: At the time of the review, there was difficulty in finding the required information on the Fusion Learning Library, as most of the materials were not task-based and the library had limited search functionality. In addition, the Training Plan did not include a periodic update of the materials.
Recommendation	The Organizational Change Team should:
	1. Review the overall training strategy for future waves or projects to ensure clear communication between the implementation team, managers, and employees regarding the expectations to complete training and maintain records. This should include a clear process for confirming training completion by field employees, with involvement from their managers.
	2. Establish a feedback loop to gather insights from end users about the effectiveness of the training process and make continuous improvements based on their feedback.
	3. Improve information availability within the Fusion Learning Library by reviewing and reorganizing existing documentation and enabling a search functionality to support efficient retrieval.
	4. Develop task-based training materials for subsequent projects by incorporating a detailed analysis of users' roles and responsibilities and relating it to specific tasks that need to be performed.
	5. Create a procedure which clearly outlines the frequency and process for reviewing and updating training materials and integrate this procedure into the City's overall ERP governance framework.
Administrative Response	*Action Plan*: The Administration agrees with the recommendations and if a new Organizational Change Management coordinator (SAP) is hired they will review the training strategy. There are resource constraints due to staffing, and the team will prioritize the work into manageable tasks over the long term. Additional steps are being taken to establish Enterprise & Business Systems standards for all technological business systems including SAP to improve and align the processes.
	Target Date: Training/adoption strategy review will occur throughout 2025

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Technical System Change Management

Effective technical system change management is critical in facilitating successful system implementations by minimizing disruptions to ongoing operations while optimizing resource utilization during implementation. It involves defining changes, thorough reviews, detailed release plans, and comprehensive testing.

Medium Risk	Performance Testing
Finding #2	Industry's best practices recommend thorough performance testing, including stress and load testing, to ensure optimal application performance under high loads. Wave 1 implementation included user acceptance testing (UAT), alpha/beta testing, and sign-off by portfolio leads, but did not include stress and load testing.
Recommendation	For future projects, the Fusion Project Implementation Team should: 1. Perform thorough stress and load testing to assess the system's responsiveness, stability, scalability, reliability, and speed under various conditions. 2. Ensure that performance testing, including stress and load testing, is included as part of its system development life cycle (SDLC) in future projects.
Administrative Response	*Action plan*: 1. The Administration agrees with performance testing the system for optimal use and as part of the move to SAP RISE data center in July 2024, an assessment and testing of memory and disk space was done to align with our system. 2. Additional steps are being taken to establish Enterprise & Business Systems standards for all technology business systems including SAP to improve and align the processes and procedures. *Target Date*: To be reviewed as part of the assessments done during SAP upgrade ending December 31, 2025.The tools, time, and effort to do stress/load testing might not be feasible in the end.

Issue Resolution

Effective issue tracking and resolution are crucial for ERP implementation success, enhancing system performance and user confidence. During Wave 1, employees logged issues via tickets, emails, chats, and calls. The Project Team maintained an issues log, providing regular updates to senior leadership. The City's support team received positive feedback for their support, though delays occurred with issues escalated to external vendors.

Medium Risk	Unresolved Wave 1 Implementation Issues
Finding #3	Timely resolution of reported issues is crucial for maintaining ERP system functionality and efficiency. Between October 2020 and May 2024, 20,733 tickets were logged, with 19,744 resolved and 989 were open. Although over 95% of the issues were resolved, some were delayed due to insufficient resources, especially complex issues requiring external vendor support.

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Medium Risk	Unresolved Wave 1 Implementation Issues
Recommendation	The Fusion Project Implementation Team should: 1. Leverage the expertise of the service providers to conduct root cause analysis on long-standing issues to identify systemic problems and implement corrective actions to prevent similar issues in future implementations. 2. Conduct a thorough skill assessment of the internal support team's resources by upskilling the support team with the expertise they require to address the reported issues. 3. Establish a periodic reporting mechanism to monitor the status of unresolved issues to allow for proactive issue management and timely resolution.
Administrative Response	*Action Plan*: 1. Administration agrees with the recommendation and has leveraged external service providers since Wave 1 and Wave 2 go lives such as SAP CAS, WFS AMS, Sodales, and HR Path to resolve long-standing issues. 2. Administration is also upskilling internal support team resources and optimizing resource assignments. 3. Administration has a reporting process to monitor status of unresolved issues and Portfolio Leads meet weekly with their business counterparts to review ticket status. *Target Date:* Work continues with external service providers; specifically, the HCM issues to be resolved by Q4 2025 by the consultant. Upskilling continues a two-year track. Weekly issues reporting/meeting are already in place.

Governance

Effective governance in ERP implementation involves defining roles, decision-making frameworks, and aligning with organizational objectives. The Wave 1 project included a kickoff meeting, requirements gathering, and a feasibility study. Go/no-go criteria and readiness assessments were established. The Executive Leadership Team provided guidance, with daily and weekly meetings to track decisions and issues. The Steering Committee focused on timeline and cost, meeting objectives despite tight schedules.

Low Risk	Documentation of Processes and Procedures
Finding #4	Effective documentation is crucial for successful enterprise software implementations, requiring systematic organization aligned with process areas and departments. During Wave 1, the project team created comprehensive documentation, but inefficiencies in organizing and retrieving information were found. Documents for Waves 1 and 2 were mixed, and inconsistent naming conventions made retrieval difficult. There were no guidelines or training on organizing and documenting information, impacting the ability to track and evaluate the implementation effectively.

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Low Risk	Documentation of Processes and Procedures
Recommendation	Develop and communicate clear guidelines for the organization of documents within the Fusion library including specifying the structure, organization, naming conventions, and location for different types of documents.
Administrative Response	*Action Plan*: Administration agrees with the recommendations and an internal working group was formed in 2023 to formalize the document structures. *Target Date*: Ongoing work, but not a priority given competing pressures on the team. Aiming for resolution by late 2026.

Access Management

Effective access management helps ensure that users have only the access necessary to perform their jobs, protecting sensitive data and maintaining system integrity. It includes granting, modifying, and revoking user permissions based on roles and responsibilities. Periodic user access reviews help ensure this access remains appropriate.

Low Risk	Automated User Access Review
Finding #5	During Wave 1 implementation, the City did not have a procedure which required periodic users access review on SAP. Subsequently, the Administration developed critical rule sets to facilitate user reviews. User access reviews are conducted twice a year. There is an opportunity to make the reviews more efficient through automation.
Recommendation	The Corporate IT and Fusion Technical Team should explore automating the user access review process to make it a consistent, repeatable, and seamless process.
Administrative Response	*Action Plan:* Administration agrees with the recommendations and will look at automating this in the future, so the process is run as a batch in the background alerting us when necessary. *Target Date:* Explore the recommendation and evaluate all implications by summer of 2026.

APPENDICES

Appendix A – Background and Rationale for Change

Pre-Implementation

Prior to January 2021, the City's IT infrastructure comprised of over 279 disparate legacy business systems and many additional departmental solutions, presenting significant challenges to operational efficiency and data accessibility. The City's legacy IT environment, characterized by numerous fragmented systems, posed the following identified substantial obstacles:

- **Data Silos and Inaccessibility:** Information was dispersed across various systems, hindering the generation of accurate and timely reports. Data retrieval and analysis required significant manual efforts, leading to delays and potential inaccuracies.
- **Manual Processes and Inefficiencies:** Heavy reliance on spreadsheets and paper documents necessitated extensive manual data manipulations for essential tasks. This reliance on manual processes hampered workflow efficiency and increased the risk of human error.
- **Disjointed Systems and Duplication:** Disconnected systems resulted in duplicative efforts across departments, hindering overall operational efficiencies. Reconciliation of data across systems was time-consuming and resource intensive.
- **Security Risks:** Outdated and unsupported legacy applications posed security vulnerabilities, exposing the City's data to potential breaches and cyber threats.

Rationale for Modernization

Recognizing the limitations of the legacy IT infrastructure, the City embarked on a strategic initiative to modernize its operations and align with industry best practices. Key objectives included:

- Establishing a centralized data platform to enhance data accuracy, accessibility, and consistency.
- Implementing industry-recommended data management practices to improve data integrity and facilitate efficient data analysis.
- Streamlining workflows and enhancing operational efficiency by consolidating where possible existing systems and automating manual processes.

The SAP ERP Solution

In support of the pursuit of these objectives, the City partnered with PwC to implement an ERP (Enterprise Resource Planning) system (SAP was the chosen system). This project named Fusion aimed to achieve the following:

- **Consolidation:** Integrate targeted ERP related legacy systems into a unified platform, eliminating data silos and streamlining data management.
- **Enhanced Efficiency:** Significantly improve operational efficiency and effectiveness by automating manual tasks and reducing reliance on paper-based processes.

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- **Data-Driven Decision Making:** Support and empower the move towards data-driven decision-making through real-time data analytics and improved data accessibility.
- **Streamlined Workflows:** Streamline workflows by automating manual tasks and fostering collaboration across departments.
- **Risk Mitigation:** Mitigate errors and security risks by implementing robust controls within the new ERP system.

Appendix B – Risk Rating Guide

The Office has introduced a risk rating to prioritize the audit recommendations in the report. The benefits of the rating are to:

- Help Administration and City Council to assess results quickly.
- Help Administration to prioritize implementation of the recommendations.
- Provides the basis for prioritizing audit follow-up.
- Makes cross-organizational comparison easier.

Criteria	Risk Rating
Corporate level loss, material reporting misstatement, critical reputation, or financial impact; critical impact on operational performance, the occurrence of fraudulent activities, critical unethical conduct, or a critical breach in laws and regulations/policies and procedures. Remediation of the finding should be immediately prioritized.	**Critical**
Significant impact on the achievement of objectives. Significant risk of service disruption, a threat to timely and effective service delivery affecting clients or a high possibility of occurrence of fraud. High-risk impact on reputation, financial, or operations. A significant breach in laws and regulations and policies and procedures.	**High**
Moderate impact on the achievement of objectives. Moderate risk of service disruptions, a threat to timely and effective service delivery affecting clients or occurrence of fraud. Moderate risk impact on reputation, financial, or operations. A moderate breach in laws and regulations/policies and procedures. Requiring process change/improvement to reduce the likelihood or impact of the risk in the future.	**Medium**
Minor impact to the achievement of objectives. Low/minimal risk of service disruption, threat to timely and effective service delivery affecting clients. Low risk impact on reputation, financial, or operations or occurrence of fraud. Minor breach in laws and regulations / policies and procedures with limited consequences. Value added process improvement or enhancement.	**Low**

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Appendix C – Implemented Recommendations

This table summarizes Administration's proactive actions to address Wave 1 implementation recommendations. Upon verification, these Findings were removed from the Detailed Report.

Focus Area	Administration Action Taken
Value for Money Analysis	**Deliverable Logs:** Documented deliverables based on Wave 1 lessons learned. Implemented monitoring of deliverables and KPIs. IT Project Management process includes risk management and business impact analysis.
Access Management	**User Access Review Process:** Defined and implemented a process to request, approve and grant developer/debug access in October 2022. Existing access is monitored regularly by the team. **Offboarding Process:** Contractor onboarding and offboarding process were implemented in Fall 2021, including steps to grant access during on-boarding and revoke access and transfer knowledge during offboarding.
Change Management	**High Turnover of Key Resources:** After Wave 1, implemented plans to ensure more balanced workloads and decreased burnout for Wave 2 and Sustainment. Based on exit interview feedback, started renewing employees at five-year contracts (vs. two-year), created opportunities to get permanent employees in the budget, increased training and conducted team building exercises. In addition: • Continuously creating knowledge documents for internal learnings and cross training, to ensure continuity when team members are absent. • Defining career and skills development opportunities to improve job satisfaction and address skills gaps. • IT has initiated an assessment and the development of an action plan to address findings related to work culture and job satisfaction gaps. **Data Migration Review and Validation:** Defined technical and business validation processes for any change in Production after Wave 1. Ongoing continuous improvement will establish Enterprise & Business Systems standards for all technology business systems including SAP to improve and align processes.
Issue Tracking	**Issues Management:** Documented an Issues Management Process, via the Change Package process in IT Service Manager, prior to Wave 1 go live.
Governance	**Project Charter:** Procedures in place, via project plans, for specific projects. Will be enacted on new projects as they happen.
Staff Training	**Training Records:** SuccessFactors Learning module was implemented in Wave 2, which enabled the ability to track learning completion for employees.
Reporting	**Data Recovery Sites:** Proximity of the primary and secondary data recovery sites was addressed with the move to SAP RISE data centre in July 2024. The primary site is in Toronto and the secondary site is in Quebec City. **Reporting Requirements:** Developed enhanced SAP self-service reporting capability via Power BI. The first sprint of creating reporting in three of the four SAP areas (i.e., EAM, SCM, and FIN) was completed by end of 2024. The last area (i.e., HCM) is in progress. Ongoing enhancements will occur as part of regular operations and continuous improvement.

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