



SUBJECT: Enterprise System update

TO: Committee of the Whole

FROM: Information Technology Services

Report Number: IT-04-18

Wards Affected: not applicable

File Numbers: 200-06

Date to Committee: July 9, 2018

Date to Council: July 16, 2018

Recommendation:

Receive and file information technology services report IT-04-18 providing an update on the city's Enterprise Resource Planning (ERP) systems.

Purpose:

To provide an update on the City's ERP systems including work completed on the 2013 10-year roadmap and preliminary plans to replace and update ERP.

An Engaging City

- Good Governance

Background and Discussion:

ERP (Enterprise Resource Planning) is business management software that allows an organization to use a system of integrated applications to manage the business. The applications allow for the efficient collection, storage and retrieval of information to support business functions and processes across the enterprise. ERP systems aim to establish a single consolidated repository and often are noted as the 'system of record' for financial and human capital management (also known as human resources). The City's ERP systems currently includes SAP for core financials and asset accounting, Banner for payroll management, and a collection of applications that support various Human Capital Management processes. Several ancillary applications have also been deployed and exist to provide additional needed functionality. An example, would be

the EmpCentre application that is used to capture and approve employee hours. Together the core and ancillary systems deliver the needed enterprise resource infrastructure and are delivered through a combination of on-premise and 3rd-party hosted applications.

Appendix A provides a diagram illustrating the ERP and related system architecture.

Halton Region currently hosts the City's SAP environment in their on-premise data centre through a Service Agreement that was established in 1997. Regional IT staff maintain the SAP environment which is separately configured and restricted for City of Burlington's use. The City is billed annually by the Region for the provision of hosting services, software licenses, disaster recovery capabilities, and support and maintenance. One-time costs associated with upgrades and enhancements are the responsibility of the City. The City has received reliable, responsive, and cost-effective services from the Region. However, the relationship with the vendor has been indirect and the City has been limited in its ability to effectively leverage and grow the capabilities of the application. The City does not always receive immediate benefits from software upgrades as they are often implemented a full year after being applied to the Region's environment. When applying the upgrades the City must procure the services of an external SAP consultant in addition to relying on Regional expertise.

In 2013, Deloitte was engaged to review the City's ERP systems and create a 10-year strategy to support ongoing needs. At that time, the City's Maintenance Management System (Avantis) was included in the scope of the assessment along with, HR and Payroll (Banner), and Core Financials (SAP). The review recognized that an unusually high number of applications were being used to support ERP business functions and recommended that the systems be rationalized and consolidated into 1-2 corporate integrated solutions. A 10-year roadmap was proposed and Council approved the recommendation in report IT 01-13 to proceed with a two-phased approach to the ERP implementation.

The first phase focused on enhanced IT governance, better management and utilization of the City's information assets, and development of a roadmap to accommodate short-term upgrades and application optimizations. This phase was to occur over a 3 to 5-year period.

The second phase was to develop a business case and a funding strategy for a consolidated ERP system that will enable digital business transformation.

This phase was to start in years 3-4 and be completed over the remaining period of the 10-year plan.

The Deloitte review also provided costs to implement a consolidated ERP system and, at that time, were estimated at \$9M to \$13M.

Following the adoption of the roadmap the City established an IT Governance model that now includes an IT Governance Team, an IT Steering committee, and a number of committees charged with evolving and enhancing key business systems.

Recognizing that data and information are valuable assets, the 10-year roadmap recommended the implementation of a data warehouse and a corporate reporting tool. In response a Business Intelligence strategy was developed in 2015 and a formal program was launched in 2016. This program will empower City staff with self-serve access to improved data analytics, dashboards, and reporting capabilities.

In 2016, an internal staff team developed a strategic roadmap for ERP as a tool to assist in executive decision-making on the future of ERP. This roadmap essentially kick-started the strategic discussions that have resulted in the implementation plan presented in this report.

Since the original review in 2013, there was a growing concern that the ERP marketplace had not evolved as expected and that a single solution would not satisfy the requirements of MMS as well as finance, HR, and payroll. The Corporate IT Strategy supported this position and recommended that MMS be considered separately due to its specific requirements. Additionally, with the existing MMS at end-of-life there was an urgency to proceed with a system replacement. Therefore, the MMS system was removed from the ERP scope and a project was launched through the PMO office in 2018 to complete the work required to proceed with an MMS replacement as a separate project.

In 2017, Deloitte was once again engaged to develop detailed functional requirements, assess options for hosting or adopting an on-premise ERP solution, and to provide updated cost estimates.

During this time, City staff also completed an extensive environmental scan that included marketplace research and consultation with municipalities that have recently completed or are, in the midst of, implementing an ERP solution. Much like the City of Burlington, other municipalities are replacing dated and siloed legacy systems with a fully integrated ERP solution.

Current ERP Challenges

The City's core enterprise systems are out of date and lacking functionality making continuous improvement efforts difficult. The systems and processes that have served us well over the last decade are now not sufficiently meeting the City's need. Current systems will not support the Burlington Leadership Team's (BLT) strategic vision of building a 21st century workforce and a 21st century city. Our current payroll system is cumbersome to operate and requires many manual adjustments. Key business processes are supported by multiple systems making routine tasks complex and inefficient. There is currently no application in place to support employee performance

management or workforce complement management. The ability to answer basic business questions has become very time consuming and often requires manual data extraction from multiple systems followed by additional manual steps to make the data usable. Microsoft Excel spreadsheets have become an integral part of business processes and have been used to fill the gaps in core system functionality. Numerous integration points exist between systems to support critical business processes like payroll. Integration points are often complex and require significant staff time within IT Services to support and maintain. The current state is not sustainable and the City is faced with the following challenges and risks:

- Growth of disconnected and disparate systems
- Inability to deploy other new technologies (e.g. Office 365)
- Inability to eliminate manual processes
- Requirement to maintain systems that are inadequate
- Ability to attract talented and tech savvy staff
- Dependency on skills to support legacy systems
- Inability to deliver on strategic objectives
- Inability to initiate replacement will delay end date past 2022
- Negative affect on public opinion and/or City reputation

Strategy/process

The implementation of IT governance and the introduction of information management and business intelligence identified as foundational work in phase 1 of the ERP roadmap are well underway and are addressing key challenges. It is now critical that the City proceed with phase 2 of the roadmap which is to deliver a modernized ERP system that will satisfy the current and future needs of the business.

The implementation and replacement of key enterprise systems is a significant undertaking that can have a profound and positive impact on the organization through increased automation and transformation of business processes. Value does not derive from buying software and implementing it. Value from ERP programs and initiatives comes from the adoption of new and/or improved ways of working. The goal is to reduce the number of peripheral, disconnected, siloed data systems and in doing so deliver a fully integrated, flexible, intuitive solution that will facilitate service delivery improvements. A properly implemented ERP system should enable digital business and deliver a measurable business impact.

The ERP marketplace is undergoing a generational shift driven by the onset of cloud computing also known as Software-as-a-Service (SaaS). SaaS is accelerating as an alternative to legacy on premise systems and is a delivery model to help organizations

gain flexibility and leverage modern cloud technologies. SaaS models are known to offer solutions that are more agile, and easier to scale. SaaS can also be enticing to organizations as it eliminates the need to manage and maintain infrastructure. In general, ERP products are becoming easier to use, more mobile friendly, and are capable of handling complex processes with multiple touchpoints through improved workflow. The City aims to take advantage of new capabilities that the market offers.

The following benefits are expected through the implementation of an updated ERP system:

- Improved business processes and elimination of manual tasks
- Improved business agility in response to service changes and improvements
- Easier and quicker access to information
- Elimination of complex and high-maintenance integration points
- Reduced dependence on spreadsheets to support business process
- Support and enable a 21st century workforce
- Increased employee satisfaction in tools
- Enable continuous improvement and innovation
- Align with and deliver incremental benefits with other initiatives (BI, CRM)
- Improved data management capabilities

The cutover and adoption of the new ERP system will be completed in phases and will contain multiple projects delivering measurable business value over time. It is expected that the HR and Payroll systems will be implemented first followed by the finance system.

The City plans to explore and assess ERP solutions through a competitive procurement process. An RFP will be issued for the procurement of software, support, and implementation services.

The procurement process would evaluate the following capabilities:

- Human Resources (recruitment, onboarding, learning and development, health & safety, disability management, labour relations, compensation & benefits, performance management, succession planning)
- Time, Attendance & Payroll
- Budgeting & Forecasting
- Financial Close & Expenses
- Projects & Assets
- Procurement, Inventory & AP
- Billing and AR

The phasing, timing and approach will be guided by the product selection(s) and vendor best practices.

The estimated timelines are as follows:

Year	Key Milestones
2018	<ul style="list-style-type: none">• Review and prioritize functional specifications• Confirm team structure and staffing, governance, sponsorship• Draft ERP RFP• Start mandatory upgrade of existing payroll system
2019	<ul style="list-style-type: none">• Issue ERP RFP• Complete mandatory upgrade of payroll system• Complete mandatory upgrade of SAP system• Begin implementation of HR system
2020	<ul style="list-style-type: none">• Begin implementation of payroll system• Complete HR implementation
2021	<ul style="list-style-type: none">• Complete payroll implementation• Begin implementation of Finance system
2022	<ul style="list-style-type: none">• Complete implementation of Finance system

Note – Detailed timelines and project plans will be developed once an ERP system has been selected.

The IT Governance team, in consultation with BLT, are establishing overarching strategic objectives for ERP and are assessing the resources required to proceed. Additional information will be presented to Council as required for budget and procurement approvals and throughout the project reporting on status and milestones achieved.

Financial Matters:

Total Financial Impact

The estimated budget to replace the systems that support finance, HR, and payroll is \$6M to \$12M (does not include staffing). The range in cost is due to several unknown variables including but not limited to the rollout strategy, number of customizations, data conversion work, and deployment option (cloud v. other).

The budget required to replace the City's MMS system is \$1.8M. This includes software, support, implementation services, and staffing.

Source of Funding

The MMS and ERP projects are included within the IT Asset Category. The 2018 Capital Budget and Forecast included funding for Enterprise System Renewals of \$914,000 in 2018 and an additional \$8.8 million forecasted over the remaining 9 years. This amount is not sufficient to support the replacement of both MMS and ERP within the desired timelines. Adjustments to the budget will be presented in the proposed 2019 Capital Budget and Forecast.

Other Resource Impacts

The efforts in updating and replacing the City's key enterprise systems are substantial and the project will require dedicated staff. It is critically important that we draw upon the expertise of internal staff and, all who are impacted are appropriately engaged and able to contribute to a successful project outcome. Staffing requirements are currently being assessed and confirmed but current estimates indicate that 10-12 dedicated staff will be needed over the four to five-year duration of the project. This is similar to the model that was applied during the original SAP implementation in 1997 when a dedicated team of staff was assigned over multiple years. Project management resources from the corporate PMO will be leveraged throughout the implementation.

Connections:

The 2016 Corporate IT Strategy emphasized the need to update ERP and other key enterprise systems. The strategy recommended that the City develop plans for the replacement of ERP and establish the necessary resources and commitment to proceed.

It is important to note that other initiatives involving the modernization of enterprise systems are currently underway including the implementation of a Customer Relationship Management (CRM) system, an updated Parks & Recreation registration system, and a Business Intelligence system. Although these projects will need to be carefully coordinated, an updated ERP system would complement and improve the effectiveness of these and other enterprise systems.

The Region of Halton currently hosts the SAP application for the City of Burlington which is used to support core financial processes. This formalized arrangement will continue until the City is ready to proceed with the financial system replacement. If SAP is the preferred solution a review of the arrangement will be undertaken to determine if our current and future needs could be accommodated.

Public Engagement Matters:

Any improvements or changes that impact the public will be communicated through the appropriate channels.

Engagement of City staff is critical to a successful implementation and will be addressed through the application of a comprehensive communication and change management strategy.

Conclusion:

The City currently uses multiple software applications to support the Finance, HR, and Payroll functions. These systems are used throughout the organization and support critical administrative functions. Existing systems have become onerous to manage, are no longer meeting the needs of the organization, do not support fully automated processes, and are at end-of-life or approaching end-of-life. The City has an opportunity to address significant challenges by implementing an up-to-date ERP system that can deliver transformational improvements that will benefit the organization, staff, and the public.

Respectfully submitted,

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Appendices:

A. City of Burlington IT architecture-ERP and first-level related systems

Report Approval:

All reports are reviewed and/or approved by Department Director, Director of Finance and Director of Legal. Final approval is by the City Manager.

Appendix A of IT-04-18

