



SUBJECT: Land Management Database Platform Review overview and results (provincially funded)

TO: Community Planning, Regulation & Mobility Cttee.

FROM: I.T. Services Department

Report Number: IT-01-23

Wards Affected: All

File Numbers: 200-02

Date to Committee: January 10, 2023

Date to Council: January 24, 2023

Recommendation:

Receive and file I.T. services department report IT-01-23 providing an overview of the results of, and the next steps resulting from, the provincially funded Land Management Database Platform Review.

PURPOSE:

Vision to Focus Alignment:

- Increase economic prosperity and community responsive city growth
 - Building more citizen engagement, community health and culture
 - Deliver customer centric services with a focus on efficiency and technology transformation
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Background and Discussion:

On October 19th, 2021 Council approved report CS-12-21, Audit and Accountability Fund – Intake 3. That report included the following recommendation:

“Direct staff to submit an Expression of Interest to the Ministry of Municipal Affairs and Housing regarding the Audit and Accountability Fund Intake 3 for a Web Architecture and Modernization Review and a Land Management Database Platform Review, by the October 28, 2021 deadline.”

Report CS-12-21 indicated the scope of the Land Management Database Platform Review as:

“The land management database platform review will investigate available options for a new integrated land management database platform, or web-based collaboration software, and associated infrastructure. This new platform would provide a solution to connect all the City’s land management data so both the public and staff can access it and easily search and work within it. The new solution that will be recommended through the land management database platform review will provide a public portal for the development industry to submit development and permit applications easily and efficiently online and allow for collaboration between staff and customers.”

Report CS-12-21 also included the following direction from the province regarding the usage of the funds.

“The funds are only available for reviews conducted by independent third-party reviewers. The types of review projects that are eligible can take the following forms:

- A line-by-line review of the municipality’s entire budget.
- A review of service delivery and modernization opportunities.
- A review of administrative processes to reduce costs.

The reviews must result in a final report that includes specific and actionable recommendations for cost savings and efficiencies.”

In a letter dated January 24, 2022 the Ministry of Municipal Affairs and Housing provided their approval of the funding request. That letter included this paragraph:

“I am pleased to inform you that your municipality’s project, *City of Burlington Land Management Technology Review*, has been approved for funding of up to \$101,760 towards the cost of an independent third-party reviewer to deliver a final report with detailed and actionable recommendations for efficiencies and cost savings.”

Related Projects

The Province has approved funding for three related City initiatives through two separate funding sources, including:

- 1) Enterprise Web Architecture & Modernization Review (Audit and Accountability Fund – Intake 3)
- 2) Land Management Database Platform Review (Audit and Accountability Fund – Intake 3)
- 3) Streamline Development Approval Initiative (Streamline Development Approval Initiative Fund)

The Enterprise Web Architecture and Modernization Review is delivering recommendations for a high-level architecture to align online customer service delivery across City services and systems and a review of the current customer relationship management solution. The Land Management Database Platform Review is delivering a comprehensive workplan to review business processes and enabling information technology related cost savings and efficiencies to the Development Approval, Permitting, Licensing, other application services and the management of the technology platform. The online customer service delivery component of the LMDPR workplan is aligned with the recommendations for a high-level Web architecture. The Streamline Development Approval Initiative Fund (SDAF) project is a project delivering specific improvements to the low density residential development approval service. The LMDPR workplan takes into account the learnings from the SDAF project.

All three initiatives share the objective of finding efficiencies and cost savings in the provision of City services related to Planning and Building. The recommendations of each report will be considered together in order to align future work and to ensure effective planning and utilization of resources and technology.

This report (IT-01-23) provides an overview of the Land Management Database Platform Review and the resulting next steps.

Strategy/process

This consulting engagement delivered a comprehensive workplan which resulted in a set of broad-based business process and information technology related cost savings and efficiencies for both staff and customers. These benefits are across all of the studied business areas: Development Approvals, Permitting, Licensing, other applications services, and management of the technology platform. These are the services that are supported by the City's Land Management Database Platform. At the core of this platform is AMANDA and the platform includes other related solutions: ESRI's Geographic Information System (GIS), Bluebeam for Electronic Plans Review (EPR), and SmartGuide for a customer portal for the services. The cost savings, efficiencies and the workplan were developed through the following process.

This project first issued an RFP for consulting services. The engagement was awarded to Perry Group Consulting Ltd, experts in Land Management Database Platforms in municipalities. The consulting engagement has been conducted through 3 phases:

- Discovery
- Analyze/ Strategize
- Plan

Discovery Phase

The Discovery Phase dove directly into identifying the Art of the Possible for information technology support of the Development Approval, the Permitting, and Licensing services with a goal of achieving cost savings and efficiencies for staff and our customers.

In the Discovery phase, staff and customers of the indicated services were interviewed to determine how the Land Management Database Platform is utilized to support their work and what opportunities they considered for cost savings and efficiencies. Approximately 100 individuals were interviewed. Among the staff interviewed both business delivery and information technology teams were engaged. Individuals were surveyed for information on how the products are managed and their thoughts on opportunities of cost savings and efficiencies in that management. In depth business process analysis was done for 8 representative services to ensure opportunities were identified and to support the cost savings model. The Red Tape Red Carpet initiative findings and discoveries in the Web Architecture and Modernization Review project and a Streamline Development Approval Initiative Fund project also informed this phase.

The current uses of, and the opportunities for, information technology to support the services were then benchmarked with peer municipalities, with vendors and with the large body of knowledge that the Perry Group has built up as the state of the art in technology supporting these services.

The key deliverable of the Discovery Phase was the Art of the Possible vision of the City's services as enabled by information technology that is currently available in the market. The vision included a list of the opportunities for that will result in cost savings and efficiencies for the Development Approval, Permitting, Licensing and the other application services. Part of the vision was the identification of opportunities in managing the Land Management Database Platform and how those opportunities could provide direct and indirect cost savings and efficiencies. These management efficiencies could lead to shortening the time to benefit resulting from each improvement in the platform destined to support the business services.

The Art of the Possible vision will result in experience improvements in all the business services for 3 key groups of people:

Customer Experience

- Online information (how to, application guides)
- Online bookings and meetings
- Online applications, document & drawing submission
- Online fees and payments

- Online manage my application (status, communications)
- Automated notification of technical deficiencies

Staff Experience

- Automated/ reduced data entry
- Automated workflow management and geo-enabled workflows
- Simple file management
- Agency and partner commenting
- Transparency and direct communication with customers
- Automated notification of technical deficiencies
- Electronic Plans Review (EPR) – digital drawings and markup and processes

Mobile Staff Experience

- Fully connected to Back Office
- Smartphone, Tablet, Laptop access
- Real time and offline
- Photos and videos
- Routing
- Dictation/ -hands free

This Art of the Possible vision, which includes the specific cost savings and efficiencies opportunities, was handed over as the starting point for the next phase.

Analyze/Strategize Phase

The Analyze/Strategize Phase took the Art of the Possible vision as detailed through the opportunities identified for cost savings and efficiencies and identified the information technology required and the workplan required to achieve the vision.

The information technology solution was addressed first. The start of this phase focused on a Fit Gap Analysis between the technologies the City has in place and the opportunities identified. This analysis determined that the City's core of the Land Management Database Platform (AMANDA and the GIS) has the core functionality needed to achieve the cost savings and efficiencies and is competitive in this market segment. The supporting products for a customer portal and EPR could be upgraded or replaced to support the delivery of the cost savings and efficiencies. Overall, it became apparent that the City is underutilizing the technology it has to support and enhance these services.

Using an agile approach, therefore, the scope and objectives of the project were adjusted to use the subsequent stages to map out a plan for implementing

enhancements to AMANDA to meet the City's needs, rather than assess alternative solutions.

The remainder of this phase focused on the preparation of the workplan (see the work packages below) that would deliver on the opportunities for cost savings and efficiencies identified by aligning business practices to better utilize the existing technology, the Art of the Possible. It includes revisiting and putting in place the upgrade of a customer portal which would be in the context of a broad City Services Portal and revisiting and putting in place the upgrade or replacement of the EPR product. The workplan presents the principles, concepts and approach that will guide executing each of the work packages and will result in an upgraded product management model for the Land Management Database Platform. This workplan includes the staffing required to execute the workplan and the costing to achieve the vision. The workplan is made up of the following work packages that could be delivered over a 3 year time period with cost savings and efficiencies over the same period as the work packages are completed.

Recommended Work Packages

Work Package	Benefits
Enabling Work – Putting in place the product management model for the platform, empowering department technical staff, and shifting work to an agile and simple product process for the project and ongoing	<ul style="list-style-type: none"> -Direct efficiencies that will result from this work package is in the staff time involved in delivering changes and enhancements to the IT platform supporting the business services. -The indirect efficiencies that will be realized is this will result in shortening time to benefit to business services that will come from the changes and enhancements of the IT platform which includes the work of this proposed project.
Training Program – Train staff and customers as part of the project and establish an ongoing training program	-This work package will deliver indirect efficiencies by ensuring optimal benefit of the IT is achieved in supporting the services by using the IT as designed on an ongoing basis
Development Applications Tracking – Undertake initial AMANDA and process enhancements to track and report on all development applications and site plan pre-consultations (to support Bill 109)	-Direct efficiencies that will result from this work package is in the staff time involved in reporting on development applications and site plan pre-consultations

<p>Initial Development Applications Online – Installing the Citizen Portal (the upgraded customer portal), integrating it with the GIS, AMANDA and process enhancements, and leveraging the portal for public search of development applications and for online applications, payments, and status tracking for pre-consultation, Site Plan, and Committee of Adjustment</p>	<p>Direct efficiencies that will result from this work package include:</p> <ul style="list-style-type: none"> -Staff time in implementing and maintaining online portal services -Staff time in responding to public queries on development applications as public moves to self-serve -Staff time in responding to applicant queries on pre-consultation, Site Plan and Committee of Adjustment as the applicant moves to self-serve -Staff time in reviewing Site Plan and Committee of Adjustment applications as the online submission will include quality checks and the process improvements will shorten the reviewing time -Staff time in processing payments for Site Plan and Committee of Adjustment applications -Note that the customers will have efficiencies in their time involved in applications, status tracking, and payments for Site Plan, Committee of Adjustment and Building Permits.
<p>GIS Integration – Setting up and configuring the AMANDA GIS interface</p>	<p>-Direct efficiencies that will result from this work package is in staff time involved in using the IT platform as the increase in ease-of-use results in a decrease in time to undertake and complete tasks. This is across all the business services using this IT platform.</p>
<p>Agency review – Put in place the agency portal for external agency circulation and commenting and leverage it for Site Plan and Committee of Adjustment development applications with AMANDA and process enhancements</p>	<p>-Direct efficiencies that will result from this work package is in the staff time involved in external agency circulation and commenting for Site Plan and Committee of Adjustment development applications</p>
<p>EPR and Document Management – Confirm or replace the current Electronic Plans Review solution, install the AMANDA document management integration and leverage these solutions for Site Plan, Committee of Adjustment</p>	<p>-Direct efficiencies that will result from this work package is in the staff time involved in plans review for Site Plan, Committee of Adjustment and Building Permits.</p> <p>-Note that the customers will have efficiencies in their time involved in plans</p>

and Building Permits with AMANDA and process enhancements	review for Site Plan, Committee of Adjustment and Building Permits.
<p>Building Permits – Enhance AMANDA and the processes for all building permits, leverage the Citizen Portal for online applications, payments and status tracking, and leverage the EPR solution for document reviews, comments (automated notification of technical deficiencies), and changes. For inspections enable online inspection booking and enable mobile inspections and deficiency identification.</p>	<p>Direct efficiencies that will result from this work package include:</p> <ul style="list-style-type: none"> -Staff time in responding to public queries on building permits as public moves to self-serve -Staff time in responding to applicant queries on pre-permit approvals and building permits as the applicant moves to self-serve -Staff time in reviewing building permits as the online submission will include quality checks and the process improvements will reduce the reviewing time -Staff time in processing payments for building permits -Staff time involved in booking inspections -Staff time accessing approved permit drawings while in the field -Note that the customers will have efficiencies in their time involved in applications, status tracking, plans review, inspection booking, addressing inspection identified deficiencies, and payments for Building Permits.
<p>Remaining Development Applications – Enhance AMANDA and the processes for the remaining development applications, leverage the Citizen Portal for online applications, payments and status tracking, leverage the Agency Review Portal for document reviews and comments, and leverage the EPR solution for document reviews, comments and changes.</p>	<p>Direct efficiencies that will result from this work package include:</p> <ul style="list-style-type: none"> -Staff time in responding to applicant queries on the remaining development applications as the applicant moves to self-serve -Staff time in reviewing the remaining development applications as the online submission will include quality checks and the process improvements will reduce reviewing time -Staff time in the external agency circulation and commenting for the remaining development applications

	<ul style="list-style-type: none"> -Staff time in plans review for the remaining development applications -Staff time in processing payments for Site Plan and Committee of Adjustment applications -Note that the customers will have efficiencies in their time involved in applications, status tracking, plans review, and payments for the remaining development applications.
<p>Licensing – Enhance AMANDA and the processes for licenses (including Animal Licenses and Death Registration), leverage the Citizen Portal for online applications, payments and status tracking and leverage the EPR solution for document reviews if required.</p>	<p>Direct efficiencies that will result from this work package include:</p> <ul style="list-style-type: none"> -Staff time in responding to applicant queries on licenses as the applicant moves to self-serve -Staff time in reviewing the license applications as the online submission will include quality checks and the process improvements will reduce reviewing time -Staff time in the external agency circulation and commenting for the licenses -Staff time in plans review for the licenses -Staff time in processing payments for licenses -Note that the customers will have efficiencies in their time involved in applications, status tracking, plans review, and payments for licenses.
<p>Forestry, Engineering, By-Law Enforcement, Fire and Vital Stats – Enhance AMANDA and the processes for Forestry, Engineering, By-Law Enforcement, Fire, and Vital Stats services, leverage the Citizen Portal for online applications and the mobile capability for By-Law Enforcement</p>	<p>Direct efficiencies that will result from this work package include:</p> <ul style="list-style-type: none"> -Staff time in responding to public queries on these applications as public moves to self-serve -Staff time in responding to applicant queries on these applications as the applicant moves to self-serve -Staff time in reviewing these applications as the online submission will include quality checks and the process improvements will reduce the reviewing time

	<ul style="list-style-type: none">-Staff time in plans review for these applications-Staff time in processing payments for these applications-Staff time involved in booking inspections and undertaking inspections for By-Law Enforcement-Note that the customers will have efficiencies in their time involved in applications, status tracking, plans review, booking and addressing concerns from By-Law Enforcement inspections, and payments for these applications.
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Plan Phase

This phase consolidated the findings from the first 2 phases and generated the final report. In order to achieve the Art of the Possible vision and the resulting cost savings and efficiencies, a 3-year workplan at an approximate budget of \$3 million has been identified through the consulting engagement. The report from the consultant is attached as Appendix A.

Next Steps

This consulting engagement has produced an Art of the Possible vision utilizing our existing platform and proposed a 3-year work plan for efficiencies in the Development Approval, Permitting, Licensing and a set of additional applications services. Staff will be analyzing the recommended workplan for viability and feasibility and assess against other priorities creating demand for staff, funding and oversight. A staff report outlining a schedule and budget for this initiative will be delivered to Council by the end of Q2 2023.

Financial Matters:

The City of Burlington Land Management Database Platform Review project was approved under the third intake of the *Audit and Accountability Fund* program for funding in the amount of \$101,760. Actual cost of the project is within the approved budget.

The forecasted costs identified in the consultant's report will be reviewed and considered as part of future capital and operating budget deliberations.

Total Financial Impact

N/A

Source of Funding

N/A

Climate Implications

During the COVID-19 pandemic, the City like many other institutions and businesses, was forced to deliver even more services online. The projects being recommended will help improve the online customer experience for several City services. This will ultimately reduce the number of trips to City Hall and lead to a reduction in GHG emissions with a major factor being the reduction of paper usage.

Engagement Matters:

Engagement was an important aspect of this consulting engagement and is an important aspect of the proposed workplan. The proposed workplan will have consultation with the following key stakeholder groups: council, the senior management team, development and design, building permit services, by-law enforcement, animal services, licensing, fire services, development industry stakeholders such as architects, engineers and designers, residents and other municipalities.

Conclusion:

The City of Burlington is grateful to the Province of Ontario for the continuation of the Audit and Accountability funding program. Through the various intakes the City has been able to conduct reviews of several City services to find efficiencies and opportunities to deliver services in innovative cost-effective ways.

Respectfully submitted,

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Appendices:

- A. Perry Group Land Management Database Platform Review Final Report

Report Approval:

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Counsel.